

Keller, Zachary A.

From: Keller, Zachary A.
Sent: Monday, May 18, 2020 3:44 PM
To: 'htieu@goldensunrisenutraceutical.com'
Subject: RE: Golden Sunrise Nutraceutical / Pharmaceutical Information

Dear Mr. Tieu,

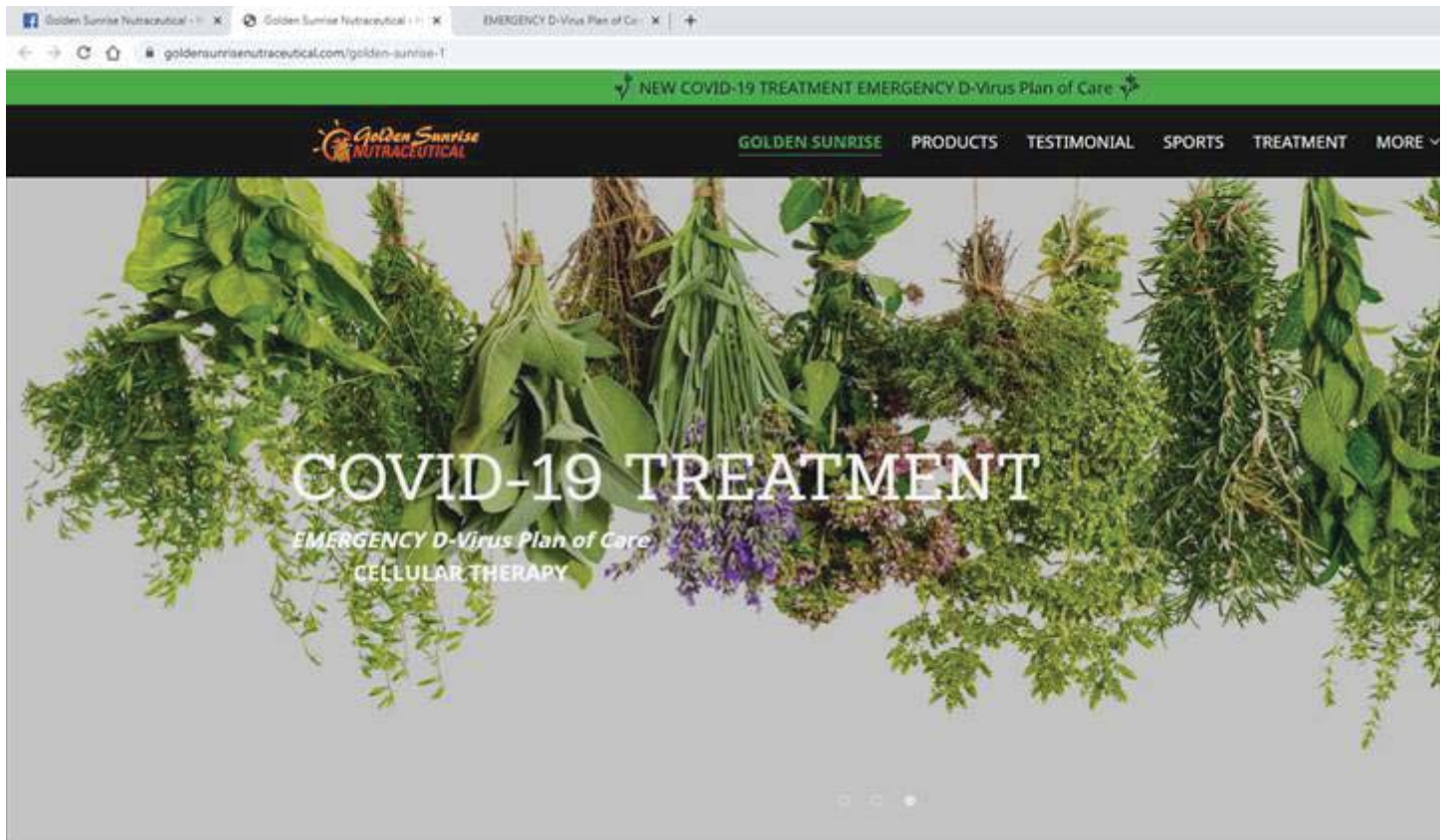
Thank you for your letter. To answer your questions:

The documentation you submitted was insufficient for two reasons. First, the FDA has not approved your product for any use associated with COVID-19. Second, even if you had received emergency use authorization for the product, those emergency use provisions expressly prohibit vendors from claiming in their marketing materials that the authorized treatments are effective or safe.

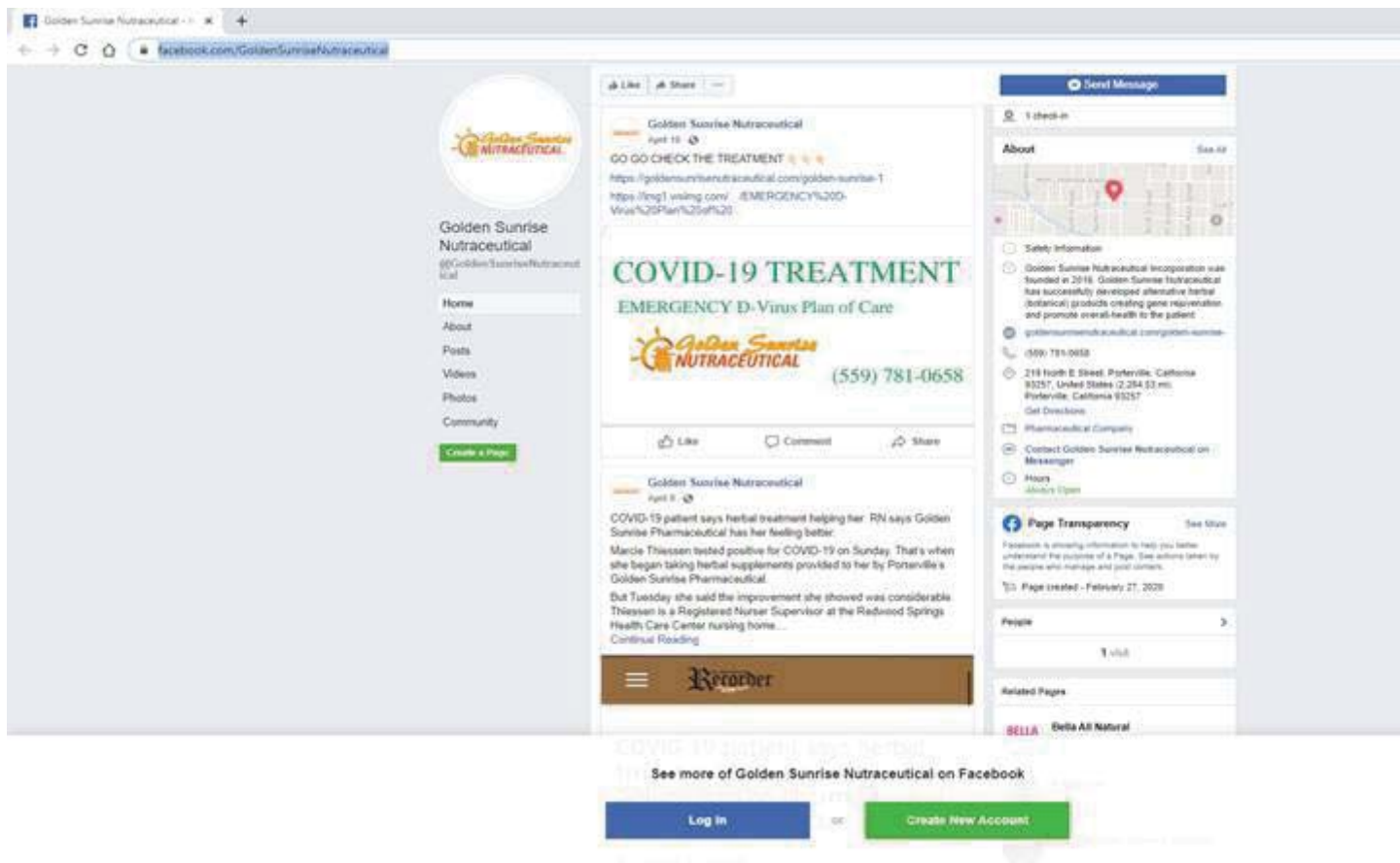
In fact, the materials you sent did not contain any representation from the FDA at all. Instead, they were only patient reports and letters you sent to the FDA. These are not sufficient, and your description of several patients you have treated does not provide the appropriate substantiation for the type of claim you are making. If you would like further guidance regarding health claims, you can review our guidance materials [here](#).

Moreover, we have noted that you have continued to market your product as preventing or curing COVID-19 on both your Golden Sunrise Nutraceutical website and your Facebook page (see images below). These, like the other claims, are actionable under the FTC Act. Simply put, there is currently no approved treatment or cure for COVID-19, including the "Emergency D" plan you are describing, and every representation you make regarding your product preventing, curing, or treating COVID-19 must be removed.

Let me be perfectly clear: **you must remove all claims regarding COVID-19 immediately**. We have fully explained our position, and it is imperative that you adhere to the rules governing marketing the products you are selling.



About Us



Best,
 Zachary A. Keller
 Attorney
 Federal Trade Commission
 Southwest Region
 1999 Bryan St. Suite 2150
 Dallas, TX 75201
 214-979-9382
zkeller@ftc.gov

From: Huu Tieu <htieu@goldensunrisenutraceutical.com>
Sent: Friday, May 15, 2020 7:51 PM
To: Keller, Zachary A. <zkeller@ftc.gov>
Cc: Elliott, James E. <JELLIOTT@ftc.gov>
Subject: Re: Golden Sunrise Nutraceutical / Pharmaceutical Information

Hello Mr. Keller,

Please find enclosed an attachment Golden Sunrise Nutraceutical letter to you dated May 15, 2020. Thank you.

Huu S. TIEU

From: Keller, Zachary A. <zkeller@ftc.gov>
Sent: Tuesday, 12 May 2020 4:29 PM

To: Huu Tieu <htieu@goldensunrisenutraceutical.com>
Subject: RE: Golden Sunrise Nutraceutical / Pharmaceutical Information

Dear Mr. Tieu,

Thank you for responding to our warning letter once you became aware of it, and thank you for taking the time to discuss with me yesterday.

With regard to the materials you submitted, I'm afraid that none of them provide any substantiation for the claims your advertising contained. Instead, they are letters petitioning the FDA for approval. In addition, the "Emergency Use" policies you described on our call and provided in the attached do not bear on whether you can market a given product as a method of preventing, treating, or curing COVID-19.

While we appreciate that you are trying to work with the FDA to get approval to market your supplement as a remedy for COVID-19, your doing so does not make it appropriate or legal for you to market or advertise those products as preventing, treating, or curing COVID-19. Moreover, I should caution you that even if the FDA does provide you an emergency use authorization, those authorizations prohibit firms from claiming in marketing materials that the authorized treatments are effective or safe. As a result, I must **repeat our letter's demand that you not make such claims in your marketing and advertising**: you cannot market products or services as curing, treating, or preventing COVID-19.

So while we understand that you are interested in helping your community at this time, we must insist that you not re-post any of the marketing materials that you took down in response to our letter. The FTC has placed a high priority on compliance with these letters and will continue to monitor recipients' marketing materials moving forward.

Thank you again for your time yesterday and for taking the time to engage with us about this issue—we greatly appreciate it.

Best,
Zachary A. Keller
Attorney
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Southwest Region
1999 Bryan St. Suite 2150
Dallas, TX 75201
214-979-9382
zkeller@ftc.gov

From: Huu Tieu <htieu@goldensunrisenutraceutical.com>
Sent: Monday, May 11, 2020 5:23 PM
To: Keller, Zachary A. <zkeller@ftc.gov>
Subject: Golden Sunrise Nutraceutical / Pharmaceutical Information

Hello Mr. Keller,

In our telephone conversation today, please find enclosed the attachments.

1. Golden Sunrise Nutraceutical letter to James E. ELLIOTT
2. Emergency Use of a Test Article
3. Golden Sunrise Nutraceutical letter to FDA & Protocol Plan of Care
4. Golden Sunrise Nutraceutical letter to FDA & Patient Results

5. D [REDACTED] M [REDACTED] Medical Report
6. G [REDACTED] T [REDACTED] Medical Report
7. N [REDACTED] M [REDACTED] Medical Report
8. R [REDACTED] H [REDACTED] Medical Report

<https://www.fda.gov/vaccines-blood-biologics/cellular-gene-therapy-products/regenerative-medicine-advanced-therapy-designation>



Regenerative Medicine Advanced Therapy Designation | FDA

As described in Section 3033 of the 21 st Century Cures Act, a drug is eligible for regenerative medicine advanced therapy (RMAT) designation if:. The drug is a regenerative medicine therapy ...

www.fda.gov

If you have any questions, please do not hesitate in giving me a call direct number **1.559.361.0097**. Thank you.

Huu S. TIEU, President
Golden Sunrise Nutraceutical, Inc.
P.O. Box 510
PORTERVILLE, CA 93258
Phone No.: 1.559.781.0658
Fax No.: 1.559.615.1268

 NEW COVID-19 TREATMENT EMERGENCY D-Virus Plan of Care 

Golden Sunrise Pharmaceutical

COVID-19 Treatment
EMERGENCY D-Virus Plan of Care

Cellular Therapy
GOLDEN SUNRISE PHARMACEUTICAL HAS PARTNERED WITH
GOLDEN SUNRISE NUTRACEUTICAL

WWW.GOLDENSUNRISENUTRACEUTICAL.COM

About Us



Welcome to Golden Sunrise Pharmaceutical

Golden Sunrise Pharmaceutical was founded in 2011. After thirty (30) long extensive years of Research and Development of **micronutrients** and **nutraceuticals**, Golden Sunrise Pharmaceutical has successfully developed alternative herbal/botanical products creating an overall-health to the patient. The priority of Golden Sunrise Pharmaceutical is to increase a healthy and productive life for those suffering from **Serious or Life-threatening** conditions, **Chronic condition**, Alzheimer's disease, Amyotrophic Lateral Sclerosis (ALS), Autoimmune disorders, Cancer, Constipation, Diabetes, Epilepsy, Debilitating Chronic Pain, Fragile-X Syndrome, Hemostasis (less blood to be lost), Hypertension, Menopause, Obesity, Parkinson's disease, Schizophrenia, Stroke, Thalassemia, Viral illnesses, and etc..... This soft approach has led to the development of effective Golden Sunrise Pharmaceutical herbal/botanical products that have helped give a safe and effective use for many patients while efficiently improving the condition without harmful "side-effects" leading to a healthier patient.



Golden Sunrise Pharmaceutical continues its research of micronutrients and nutraceuticals to further develop other herbal/botanical products to try and help individuals with other incurable diseases.

PHYSICIANS



Golden Sunrise Pharmaceutical are now being recommended and prescribed by the following physicians:

Stephen MEIS, Medical Director, M.D., Medical Board Certified

Phone No.: 1.559.901.0975

Nikki ARGUINZONI-GIL, N.D.

Phone No.: 1.310.808.5343

Contact Us

GOLDEN SUNRISE PHARMACEUTICAL

P.O. Box 510, PORTERVILLE, CA 93258 * U.S.A

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INFO@GOLDENSUNRISEPHARMACEUTICAL.COM

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EMERGENCY D-Virus**Plan of Care*****CELLULAR THERAPY*****DIETARY SUPPLEMENT PRODUCTS**

AnterFerron-1, AnterFerron-2, ImunStem, and Aktiffvate

COMPANY

Golden Sunrise Nutraceutical, Inc.

219 North E Street

PORTERVILLE, CA 93257 * U.S.A.

Phone No.: 1.559.781.0658

Fax No.: 1.559.615.1268

PLEASE DOWNLOAD AT

www.goldensunrisenutraceutical.com

“TREATMENT”

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1.0 INTRODUCTION

Stephen R. MEIS, M.D., Board Certified, I strongly recommend Golden Sunrise Nutraceutical Incorporation herbal products *ImunStem* and *Aktiffvate*, along with their *AnterFeerons* product, as uniquely qualified to treat and modify the course of the Coronavirus epidemic in CHINA and other countries. Patients with late stages of *COVID-19*, *Hepatitis C*, and *AIDS / HIV* have responded with greatly improved quality-of-life and extending their lives when treated with *ImunStem* and *Aktiffvate*. For viral colds, *Aktiffvate*, when given in frequent dosing, as frequent as every one half (½) hour to one (1) hour, will not only alleviate the symptoms quickly, but stop the cold virus itself, usually in less than 2 – 3 days. Now *AnterFeerons* has been added to the *ImunStem* and *Aktiffvate* and shown added improvement for a variety of infections associated with cancer patients and the chronically ill, whether it be viral or bacterial.

ImunStem and *Aktiffvate* herbs are the basis of the whole cellular therapy developed by Golden Sunrise Nutraceutical. They have proven themselves to the United States Food & Drug Administration (FDA). *ImunStem*, an herbal product, was the first dietary supplement in the United States to be approved as a prescription medicine and also for the indication to treat *Serious or Life-threatening* conditions. It qualified for both of these under the Regenerative Medicine Advance Therapy (RMAT) designation in the 2016 Cures Act, enacted by the 114th United States Congress. This designation acknowledges not only the effectiveness of these herbs, usually only associated with pharmaceutical drugs, but also causing no side effects, a quality of dietary supplements.

Golden Sunrise Nutraceutical metabolic therapies will treat *Serious or Life-threatening* conditions. These conditions result from an accumulation of toxins in the body from food additives, preservatives, pesticides, prescription drugs, and industrial pollution that disrupt the immune system and cell metabolism. Regenerating the cellular metabolic abnormalities with plant based botanicals found in the *EMERGENCY D-Virus Plan of Care* is the basis for the remarkable improvement for human health.

The technology developed by Golden Sunrise Nutraceutical is the key for the effectiveness of the herbs on the immune system and cellular metabolism. They have immune stimulating properties. In-vivo studies on treated patients demonstrate increasing phagocytic activity and synthesis of helper cell function. The cells possess a bipolarity and lipophilicity that facilitates molecular diffusion through permeable and selective membranes, including crossing the blood / brain barrier. Golden Sunrise Nutraceutical herbal supplements are able to penetrate the cells at the cellular level without any disruption or damage to the cells because they are recognized as food. This food provides the cells with the necessary building blocks for the cells to repair and rejuvenate themselves and flush out the accumulated toxins in the cells.

Golden Sunrise Nutraceutical products and treatments improve genetic *Telomeres* for cellular regeneration which increases the overall-health of the body and can increase human longevity.

2.0 INSTRUCTIONS FOR THE TREATMENT

General dosing recommendations: *ImunStem* and *Aktiffvate* should be taken throughout the course of the illness. Recommended starting dose for those without any viral symptoms would be twice a day administration, but for someone with chronic health issues three (3) or four (4) times a day is advised. For someone who is exhibiting symptoms, after three (3) days of the *ImunStem* and *Aktiffvate*, the

Aktiffvate alone should be increased to a quarter dropperful for about eight (8) or nine (9) times a day in addition to be *ImunStem* / *Aktiffvate* combination already being taken by the patient. With this increased dosing of *Aktiffvate*, disappearance of viral symptoms is expected within two (2) to four (4) days. If symptoms however do not resolve with this regimen or the person is steadily worsening, the *AnterFeerons* should be used as directed. For the infirmed or elderly, the *AnterFeerons* must be administered under direct observation of health professionals, because it will bring on nausea and or vomiting as part of utilizing the body's natural shedding mechanism of the illness / virus. It will cause some dehydration which must be compensated either by an electrolyte solution (*Pedialyte*, *Gatorade*, etc.) or IV fluids.

2.1 Administration and Dosage of *IMUNSTEM* and *AKTIFVATE*

Upon the first visit it is suggested that once the medical evaluation of the patient is completed and the medical staff deems it appropriate, then patients will receive $\frac{1}{2}$ – $\frac{3}{4}$ of a dropperful of *ImunStem* and *Aktiffvate* 1–4 times a day. The medical staff should monitor the patient for at least ten (10) minutes to help with any effects that might need other medical attention. For example, *ImunStem* can open and improve blood flow throughout the body and the patient might experience a feeling of warmth and begin having nasal mucus discharge. After ten (10) minutes if the patient is stable, the $\frac{1}{2}$ – $\frac{3}{4}$ dropperful of *Aktiffvate* should be administered with similar monitoring.

ImunStem and *Aktiffvate* are liquid form:

Product	Dose	Dose Size of a Dropper	Dose Per day
<i>ImunStem</i>	1 ml	$\frac{1}{2}$ - $\frac{3}{4}$	1–4
<i>Aktiffvate</i>	1 ml	$\frac{1}{2}$ - $\frac{3}{4}$	1–4

2.2 Administration and Dosage of *ANTERFEERONS*

Take one fluid ounce (1 fl.oz.) of *AnterFeeron-1*. Then in forty-five (45) minutes to one (1) hour following ingestion of *AnterFeeron-1*, take one fluid ounce (1 fl.oz.) of *AnterFeeron-2*, administered in the same dose. Each bottle must be emptied into a small glass and swallowed quickly all at once (not sipped or sniffed), followed by water to wash it down.

AnterFeeron-1 and *AnterFeeron-2* are liquid form:

Product	Dose
<i>AnterFeeron-1</i>	1 fl.oz.
<i>AnterFeeron-2</i>	1 fl.oz.

2.3 Ongoing Treatment

The patient should receive $\frac{1}{2}$ – $\frac{3}{4}$ of a dropperful of *ImunStem* and *Aktiffvate* between 1–4 times daily for the first two (2) weeks. Then another medical evaluation should be performed to evaluate their effectiveness and to determine if modification in dose to 2–3 times daily is appropriate. Blood test before treatment, and at 2–4 weeks can be helpful to evaluate effectiveness. If the patient appears to be stable, then other Golden Sunrise Nutraceutical product supplementation should be added to specific conditions or diseases of the patient. All future treatments should take into account any physicians evaluations, blood reports or other information pertinent to the treatment of the patient.

ImunStem, *Aktiffvate*, and *AnterFeerons* are available now and once they are started, they will help alleviate the people immediately with the acute illness of the Coronavirus. But this treatment, which is tailored for this acute emergency, is the beginning of Golden Sunrise Nutraceutical's **METABOLIC Plan of Care**. The **METABOLIC Plan of Care** is a carefully planned course of therapy with herbal treatments to treat at a cellular level chronic illnesses such as hypertension, diabetes, peripheral neuropathies, parkinsonism, multiple sclerosis, gastrointestinal conditions, schizophrenia, Lyme's disease, to name a few. It is a preventative for cancer, which primarily is a metabolic problem like our other diseases. For those who start with the **EMERGENCY D-Virus Plan of Care**, it would be ideal to continue with Golden Sunrise's **METABOLIC Plan of Care**.

3.0 WARNING AND PRECAUTIONS

ADMINISTRATION OF *IMUNSTEM*, *AKTIFFVATE*, *ANTERFEERON-1*, and *ANTERFEERON-2*, SHOULD ALWAYS BE UNDER THE SUPERVISION OF A PHYSICIAN.

RECOMMENDATION FOR GOLDEN SUNRISE NUTRACEUTICAL **EMERGENCY D-VIRUS PLAN OF CARE** IS BASED ON MEDICAL EVALUATION OF THE PATIENT. THESE PRODUCTS CAN LOWER BLOOD SUGAR IN DIABETICS AND LOWER BLOOD PRESSURE IN HYPER-TENSIVE PATIENTS. BLOOD SUGAR AND BLOOD PRESSURE SHOULD BE MONITORED FOR THOSE WITH A HISTORY OF HIGH SENSIVITY TO MEDICATIONS. A LOWER STARTING DOSE MIGHT BE APPROPRIATE.

4.0 DRUG INTERACTIONS

ImunStem, *Aktiffvate*, and *AnterFeerons* has been reported, so far, to have had many interactions with single or multiple combination of prescription drugs. You should always read product labels. If you have a medical condition, or are taking other prescription drugs, herbs, or dietary supplements, you should speak with a qualified healthcare provider before starting a new therapy.

5.0 THERAPEUTIC RESPONSE

5.1 Adverse Sensitivity Response of *ImunStem* and *Aktiffvate*

- *ImunStem* and *Aktiffvate* can cause severe allergic skin rashes.
- Vomiting.
- In rare circumstances an adverse sensitivity response in the mouth, such as mild blisters, have occurred.
- A burning sensation in the throat in the beginning of oral treatment may occur, but it subsides. If the burning sensation persists, gelatin capsules used for administration, may be substituted as an alternative.

6.0 RESULTS OF PATIENTS AFTER TREATMENT

The group of patients **COVID-19** virus found that **EMERGENCY D-Virus Plan of Care** improved the immune system and alertness immediately. Physicians have observed that using **EMERGENCY D-Virus Plan of Care** provokes a significant response, i.e., a reduction in symptoms in patients with the **COVID-19** virus.

On April 2020, five (5) patients administered **EMERGENCY D-Virus Plan of Care** over the course of time from 1 – 2 weeks, controlled under supervision of a physician “**Clinical Assessment and Progress Note**” included observations by Golden Sunrise Nutraceutical medical staff.

Safety was monitored and throughout these five (5) patients no adverse side-effects were noticed. A total of five (5) patients were diagnosed with **COVID-19** virus that required close monitoring by both the attending physician, specialist of that field and by Golden Sunrise Nutraceutical medical staff.

Five (5) PATIENTS’ Histories and EMERGENCY D-Virus Plan of Care Treatment of COVID-19.

Four (4) patients who were confirmed with **COVID-19** illness, were treated with the **EMERGENCY D-VIRUS Plan of Care**. They were all treated in their homes. They showed improvement by day number day two (#2) or number day three (#3) of the treatment. All were asymptomatic by day number seven (#7) to day number nine (#9) of treatment.

- a) M.T. is a 49-year-old, Caucasian nurse with heart arrhythmia, female. Her symptoms first began on Thursday, 04/02/2020 with ninety-nine point six (99.6°F) degrees Fahrenheit fever, some body aches and bad headaches. She quickly progressed to fevers, tightness in her chest, shortness of breath, severe fatigue, generalized muscle aches and pains, no appetite, headaches, sore throat, and severe dry cough.

She started **EMERGENCY D-Virus Plan of Care** treatment on Saturday, 04/04/2020 (her **COVID-19** test resulted positive on Sunday, 04/05/2020). The next day she ‘sensed’ improvement, but uncertain of any improvement. By day number five (#5), on Wednesday, 04/08/2020, she exclaimed “I can take a deep breath” and she “slept like a baby”. By Sunday, 04/12/2020, day number nine (#9), she was completely asymptomatic of all of her symptoms, and **repeat COVID-19** test was done on **Friday, 04/17/2020. It was positive.** The next day, day number fifteen (#15) on Saturday, 04/18/2020, she had a fever of ninety-nine point nine (99.9°F) degrees Fahrenheit and increasing cough, no other symptoms, energy level was still good. She proceeded to the **METABOLIC Plan of Care** that evening. On day number sixteen (#16) and day number seventeen (#17), on Sunday, 04/19/2020 and Monday, 04/20/2020, no fevers and the cough continues improvement on the **METABOLIC Plan of Care.**

- b) R.H. is a 50-year-old, Hispanic insulin-using diabetic and asthmatic, male. He was confirmed **COVID-19** positive on Thursday, 04/02/2020. He **failed** a five (5) days course of **Hydroxychloroquine** and **Azithromycin**. He was still experiencing fevers up to one hundred and three point five (103.5°F) degrees Fahrenheit, severe headaches, chills, loss of appetite with loss of about five (5 lbs) pounds, shortness of breath, bad dry cough, chest tightness, severe generalized muscle pains, extreme fatigue, and insomnia, and some diarrhea (from the **Hydroxychloroquine** most likely per patient).

He started the **EMERGENCY D-Virus Plan of Care** on the evening of Wednesday, 04/08/2020. Successively, starting with the next day of treatment, on Thursday, 04/09/2020, his fevers started to improve as well as his other symptoms. Since day number six (#6) on Monday, 04/13/2020, he remained afebrile. He was completely asymptomatic (no cough / chest tightness, etc.) by day

number nine (#9) on Thursday, 04/16/2020. **COVID-19** retest was **positive** on **Friday, 04/17/2020**, day number ten (#10) of follow up even though he had been afebrile since Monday, 04/13/2020. The next day number eleven (#11), **Saturday, 04/18/2020**, the patient had a **temperature of ninety-eight point nine (98.9°F)** degrees Fahrenheit and question of chest tightness, but he felt great energy and he **ran two (2) miles** that day. He was started on the **METABOLIC Plan of Care** that day, on Saturday, 04/18/2020, and has remained asymptomatic on this.

- c) D.M. is a 64-year-old, healthy Caucasian who had persisting symptoms for three (3) weeks, male. He returned with his wife, from NETHERLANDS Holland on Tuesday, 03/17/2020. He was in bed for two (2) days with fever, chills, a cough – dry and also productive at times, chest tightness, loss of his sense of taste and smell, no appetite, slight headaches, burning in his nasal / sinus areas, and mild muscle aches. He was not able to completely recover. He continued to suffer from low energy, poor sense of taste and smell, mild dry cough, some tightness in his chest and inability to take a deep breath, and recurrent mild headaches. He could become winded and light-headed doing outdoor chores. He was **COVID-19** confirmed on Thursday, 04/09/2020.

On Thursday, 04/09/2020 he started the **EMERGENCY D-Virus Plan of Care**. Steadily his symptoms improved until he was asymptomatic by day number seven (#7) of treatment, on Wednesday, 04/15/2020.

- d) N.M. is a 62-year-old, healthy Caucasian who returned from her trip with her husband from NETHERLANDS Holland on Tuesday, 03/17/2020, female. She similarly like her husband battled with persisting symptoms for about three (3) weeks. About on Thursday, 03/19/2020 she was in bed for two (2) days. She had a low-grade fever, mild headaches, generalized muscle achiness, bad dry cough, tightness in the chest, shortness of breath, fatigue, poor appetite, and poor sense of taste and smell. She slowly improved, but she had persisting mild / moderate dry and productive cough, chest tightness, fatigue, and some improved appetite. She was having periodic fever as well, none of them ever higher than one hundred (100°F) degrees Fahrenheit. She failed a course of **Ciprofloxacin** and then was **COVID-19** positive on Saturday, 04/04/2020. On Wednesday, 04/08/2020, she took only one (1) dose each of **Hydroxychloroquine** and **Azithromycin**, then chose the **EMERGENCY D-Virus Plan of Care**.

On Wednesday, 04/08/2020 she started **EMERGENCY D-Virus Plan of Care** (day number one (#1) of treatment). By the next day, on Thursday, 04/09/2020, day number two (#2) of treatment, she already had improved energy and ability to concentrate. Her symptoms steadily improved until she was symptom-free by Wednesday, 04/15/2020, day number eight (#8) of treatment.

- e) A **fifth COVID-19** positive patient on Saturday, 04/11/2020, started receiving the **EMERGENCY D-Virus Plan of Care** on Wednesday, 04/15/2020.

N.R. is a 28-year-old, healthy Hispanic male, who started symptoms on Friday, 04/10/2020 with fevers up to one hundred and two (102°F) degrees Fahrenheit, shortness of breath, sinus / nasal congestion and pressure, “non-stop” phlegm production, no appetite, extreme fatigue, generalized muscle pain, insomnia, and poor taste and smell.

On Wednesday, 04/15/2020 he started **EMERGENCY D-Virus Plan of Care**. By the next day, day number two (#2) of treatment, on Thursday, 04/16/2020, the patient was already noticing improvement in his taste and smell, and most of his other symptoms, i.e. muscle pain etc. He has been afebrile since day number four (#4), on Saturday, 04/18/2020. Follow up in coming.

Summary:

All patients have become completely asymptomatic by day number seven (#7) to day number nine (#9) of treatment with the **EMERGENCY D-Virus Plan of Care**. Once people are afebrile for three (3) days and with improved cough, current policy allows discontinuation of self-quarantine measures. Up until now, because there has been no effective treatment, the effort of controlling the **COVID-19** virus pandemic has necessitated a preventative approach, utilizing social isolation measures and testing. Success with these measures come at great cost both socially and economically. Now with the **EMERGENCY D-Virus Plan of Care** showing effective treatment for the **COVID-19** virus, the focus can change, at it should, from prevention to treatment. Social isolation and **COVID-19** testing can be significantly adjusted with treatment taking the primary approach of controlling the **COVID-19** virus. Prompt administration of this treatment will significantly diminish the occurrence of serious cases and need for hospitalization. Confidence can be restored and people can return much more quickly, more likely in a matter of seven (7) to nine (9) days instead of weeks, to a more normal life style.

7.0 STORAGE, HANDLING, AND PRODUCTS**7.1 Storage and Stability**

STORAGE: Store materials at controlled room temperature 20°C (68°F).

STABILITY: **EMERGENCY D-Virus Plan of Care** is chemically stable for two (2) years at room temperature. Do not freeze.

7.2 Product Classification

Dietary Supplement.

8.0 ATTACHMENT LABELS

ImunStem, Aktiffvate, AnterFerron-1, and AnterFerron-2

9.0 HOW SUPPLIED**9.1 Packaging**

PRODUCT	CONTAINER CONTENT	NET CONTENT
<i>AnterFerron-1</i>	1 bottle	1 fl.oz. Liquid
<i>AnterFerron-2</i>	1 bottle	1 fl.oz. Liquid
<i>ImunStem</i>	2 bottle	1 fl.oz. Liquid
<i>Aktiffvate</i>	2 bottle	1 fl.oz. Liquid

AnterFeeron-1

Dietary Supplement

WARNING

Keep out of reach of children
do not use if safety seal is damaged or missing

SUPPLEMENT FACTS

Serving Size: (1 fl.oz.) (491.50mg)

Serving Per Container: One (1) serving

Amount Per Serving		%DV
Bilberry leaf	40mg	**
Graviola	120mg	**
Goldenseal	80mg	**
** Daily Value (DV) not established.		

Other Ingredients: solvents, organic compounds, Chuchuhuasi, Cayenne, Maca, and Turmeric.

STRUCTURE FUNCTION

“Support Immunity” and “Boost Stamina”

“Helps Maintain Joint Health and Flexibility”

“Helps Maintain Cardiovascular Function and a Healthy Circulatory System”

The *AnterFeeron-1* has no side-effects. It will promote the body's natural cleansing process which may include purging responses such as nausea, diarrhea, vomiting and mucus discharges. Other possible symptoms a person can experience may depend on the person's previous health issues, which may include headaches, migraines, weakness, muscle aches, joint pain, heart palpitations, inflammation of the throat, excessive bloating, gas, and shortness of breath. These symptoms are only temporary at the time that the patient is being treated with *AnterFeeron*. ONLY USE UNDER THE SUPERVISION OF A PHYSICIAN'S CARE.

Administration: Empty entire contents of *AnterFeeron-1* into a glass cup and swallow entire contents.

Dosage: Take one fluid ounce (1 fl.oz.)

AnterFeeron-1 dietary supplement may support immunity, improve overall health for the human body and maintain good well-being.

WARNING: Not recommended for use by pregnant or nursing women. Should you have any questions regarding the use of *AnterFeeron-1*, please consult your doctor or call the product hot line in U.S.A. at 1.559.781.0658 or 1.559.361.0097. Keep out of reach of children. To be kept in a dry and cool place.

* These statements have not been evaluated by the Food and Drug Administration (FDA). This product is not intended to diagnose, treat, cure or prevent any disease.

AnterFeeron-2

Dietary Supplement

WARNING

Keep out of reach of children
do not use if safety seal is damaged or missing

SUPPLEMENT FACTS

Serving Size: (1 fl.oz.) (491.50mg)

Serving Per Container: One (1) serving

Amount Per Serving		%DV
Astragalus	20mg	**
Reishi	95mg	**
Mistletoe	45mg	**
** Daily Value (DV) not established.		

Other Ingredients: Cat's claw, organic compounds, Echinacea, and Cordyceps.

STRUCTURE FUNCTION

"Promote Bowel Movements"

The *AnterFeeron-2* has no side-effects. It will promote the body's natural cleansing process which may include purging responses such as nausea, diarrhea, vomiting and mucus discharges. Other possible symptoms a person can experience may depend on the person's previous health issues, which may include headaches, migraines, weakness, muscle aches, joint pain, heart palpitations, inflammation of the throat, excessive bloating, gas, and shortness of breath. These symptoms are only temporary at the time that the patient is being treated with *AnterFeeron*. ONLY USE UNDER THE SUPERVISION OF A PHYSICIAN'S CARE.

Administration: Empty entire contents of *AnterFeeron-2* into a glass cup and swallow entire contents.

Dosage: Take one fluid ounce (1 fl.oz.)

AnterFeeron-2 dietary supplement may support immunity, improve overall health for the human body and maintain good well-being.

WARNING: Not recommended for use by pregnant or nursing women. Should you have any questions regarding the use of *AnterFeeron-2*, please consult your doctor or call the product hot line in U.S.A. at 1.559.781.0658 or 1.559.361.0097. Keep out of reach of children. To be kept in a dry and cool place.

* These statements have not been evaluated by the Food and Drug Administration (FDA). This product is not intended to diagnose, treat, cure or prevent any disease.

ImunStem[®]

Dietary Supplement

WARNING

Keep out of reach of children
do not use if safety seal is damaged or missing

SUPPLEMENT FACTS

Serving Size: (0.50ml) (491.50mg)

Serving Per Container: 25 servings

Amount Per Serving		%DV
Olive Leaf extract	260mg	**
Yarrow extract	52mg	**
Rosemary extract	63mg	**
** Daily Value (DV) not established.		

Other Ingredients: Organic compounds and solvents, monoterpene, Cassia oil, and Yucca.

STRUCTURE FUNCTION

“Support Immunity” and “Boost Stamina”

“For the Relief of Occasional Sleeplessness”

“Maintains Healthy Lung Function”

“Helps Restore Mental Alertness or Wakefulness when Experiencing Fatigue or Drowsiness”

“Helps You Relax”

ADVERSE ACTIONS

- * In rare circumstances an adverse reaction in the mouth such as “mild blisters” have occurred.
- * A burning sensation in the throat in the beginning of oral treatment may occur, but subsides. If the burning sensation persists, filling gelatin capsules and swallowing may be substituted as an alternative.
- * Vomiting.
- * Yarrow flowers can cause severe allergic skin rashes.

Shake bottle well before using and use dropper to place ½ – ¾ dropperful of *ImunStem* under the tongue. Leave under the tongue for approximately forty (40) seconds and then swallow with a drink of water.

Dosage: Take ½ – ¾ dropperful, 1–4 times a day, as frequently as every 1–3 hours.

ImunStem dietary supplement may support immunity, improve overall health for the human body and maintain good well-being.

WARNING: Not recommended for use by pregnant or nursing women. Should you have any questions regarding the use of *ImunStem*, please consult your doctor or call the product hot line in U.S. at 1.559.781.0658 or 1.559.361.0097. Keep out of reach of children. To be kept in a dry and cool place.

* These statements have not been evaluated by the Food and Drug Administration (FDA). This product is not intended to diagnose, treat, cure or prevent any disease.

Aktiffvate®

Dietary Supplement

WARNING

Keep out of reach of children
do not use if safety seal is damaged or missing

SUPPLEMENT FACTS

Serving Size: (0.50ml) (491.50mg)

Serving Per Container: 25 servings

Amount Per Serving		%DV
Turmeric extract	175mg	**
Cayenne extract	40mg	**
Eucalyptus extract	20mg	**
** Daily Value (DV) not established.		

Other Ingredients: Wintergreen, solvents, organic compounds, Yucca, and Olive leaf.

STRUCTURE FUNCTION

“Support Immunity” and “Boost Stamina”

“For the Relief of Occasional Sleeplessness”

“Maintains Healthy Lung Function”

“Helps Restore Mental Alertness or Wakefulness when Experiencing Fatigue or Drowsiness”

“Helps You Relax”

“Helps Maintain Cardiovascular Function and a Healthy Circulatory System”

“Reduces Stress and Frustration”

ADVERSE ACTIONS

* In rare circumstances an adverse reaction in the mouth such as “mild blisters” have occurred.

* A burning sensation in the throat in the beginning of oral treatment may occur, but subsides. If the burning sensation persists, filling gelatin capsules and swallowing may be substituted as an alternative.

* Vomiting.

Shake bottle well before using and use dropper to place ½ – ¾ dropperful of *Aktiffvate* under the tongue. Leave under the tongue for approximately forty (40) seconds and then swallow with a drink of water.

Dosage: Take ½ – ¾ of a dropperful, 1–4 times a day, as frequently as every 1–3 hours.

Aktiffvate dietary supplement may support immunity, improve overall health for the human body and maintain good well-being.

WARNING: Not recommended for use by pregnant or nursing women. Should you have any questions regarding the use of *Aktiffvate*, please consult your doctor or call the product hot line in U.S. at 1.559.781.0658 or 1.559.361.0097. Keep out of reach of children. To be kept in a dry and cool place.

* These statements have not been evaluated by the Food and Drug Administration (FDA). This product is not intended to diagnose, treat, cure or prevent any disease.

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

Federal Trade Commission,

Plaintiff,

v.

Jason Cardiff, et al.,

Defendants.

FILED UNDER SEAL

Case No. 18-cv-2104

EX PARTE TEMPORARY
RESTRAINING ORDER WITH
ASSET FREEZE,
APPOINTMENT OF A
TEMPORARY RECEIVER, AND
OTHER EQUITABLE RELIEF,
AND ORDER TO SHOW CAUSE
WHY A PRELIMINARY
INJUNCTION SHOULD NOT
ISSUE

Plaintiff, the Federal Trade Commission, has filed its Complaint for Permanent Injunction and Other Equitable Relief pursuant to Section 13(b) of the Federal Trade Commission Act (“FTC Act”), 15 U.S.C. § 53(b), the Restore Online Shoppers’ Confidence Act, (“ROSCA”), 15 U.S.C. §§ 8401-8405, and the Electronic Fund Transfer Act (“EFTA”), 15 U.S.C. §§ 1693-1693r, and Section 6

1 of the Telemarketing and Consumer Fraud and Abuse Prevention Act (the
2 “Telemarketing Act”), 15 U.S.C. § 6105, and has moved, pursuant to Fed. R. Civ.
3 P. 65(b), for a temporary restraining order, asset freeze, other equitable relief, and
4 an order to show cause why a preliminary injunction should not issue against
5 Defendants Jason Cardiff, Eunjung Cardiff, a/k/a Eunjung Lee, a/k/a Eunjung No,
6 Danielle Cadiz, a/k/a Danielle Walker, Redwood Scientific Technologies, Inc.
7 (California), Redwood Scientific Technologies, Inc. (Nevada), Redwood Scientific
8 Technologies, Inc. (Delaware), Identify, LLC, Advanced Men’s Institute Prolongz
9 LLC, Run Away Products, LLC, and Carols Place Limited Partnership.

10 **FINDINGS OF FACT**

11 The Court, having considered the Complaint, the *ex parte* Application for a
12 Temporary Restraining Order, declarations, exhibits, and the memorandum of
13 points and authorities filed in support thereof, and being otherwise advised, finds
14 that:

15 A. This Court has jurisdiction over the subject matter of this case, and
16 there is good cause to believe that it will have jurisdiction over all parties hereto
17 and that venue in this district is proper.

18 B. In numerous instances, Defendants have misrepresented the
19 effectiveness of their dissolvable film strip products for smoking cessation, weight
20 loss, and improved male sexual performance, thereby misleading vulnerable
21 consumers. Defendants have then further injured many consumers by placing
22 them on unauthorized continuity plans that resulted in additional charges to their
23 credits cards or withdrawals from their debit accounts. Defendants have also made
24 false earnings claims as part of a multilevel marketing plan, and illegally caused
25 more than one million robocalls to be made to consumers’ telephones.

26 C. There is good cause to believe that Defendants Jason Cardiff, Eunjung
27 Cardiff, Danielle Cadiz, Redwood Scientific Technologies, Inc. (California),
28 Redwood Scientific Technologies, Inc. (Nevada), Redwood Scientific

1 Technologies, Inc. (Delaware), Identify, LLC, Advanced Men’s Institute Prolongz
2 LLC, Run Away Products, LLC, and Carols Place Limited Partnership have
3 engaged in and are likely to engage in acts or practices that violate Sections 5(a)
4 and 12 of the FTC Act, Section 4 of ROSCA, Section 907(a) of EFTA, EFTA’s
5 implementing Regulation E, and the Telemarketing Sales Rule (“TSR”), and that
6 Plaintiff is therefore likely to prevail on the merits of this action. As demonstrated
7 by Defendants’ own advertising and communications, consumer complaints,
8 declarations, and the additional documentation filed by the FTC, the Commission
9 has established a likelihood of success in showing that Defendants have
10 deceptively marketed TBX-FREE, Eupepsia Thin, and Prolongz, placed consumers
11 on continuity plans without their prior authorization, charged consumers’ credit
12 cards and debited their bank accounts without authorization, caused robocalls to be
13 made to more than one million consumers to induce the sale of goods or services,
14 and misrepresented the earnings that people who join their multi-level marketing
15 program are likely to make.

16 D. The FTC is likely to succeed in showing that Corporate Defendants
17 Redwood Scientific Technologies, Inc. (California), Redwood Scientific
18 Technologies, Inc. (Nevada), Redwood Scientific Technologies, Inc. (Delaware),
19 Identify, LLC, Advanced Men’s Institute Prolongz LLC, Run Away Products,
20 LLC, and Carols Place Limited Partnership operate as a common enterprise and are
21 the alter egos of Jason Cardiff and Eunjung Cardiff.

22 E. There is good cause to believe that immediate and irreparable harm
23 will result from Defendants’ ongoing violations of the FTC Act, ROSCA, EFTA
24 and Regulation E, and the TSR unless Defendants are restrained and enjoined by
25 order of this Court.

26 F. There is good cause to believe that immediate and irreparable damage
27 to the Court’s ability to grant effective final relief for consumers – including
28 monetary restitution, rescission, or disgorgement – will occur from the sale,

1 transfer, destruction or other disposition or concealment by Defendants of their
2 assets or records, unless Defendants are immediately restrained and enjoined by
3 order of this Court; and that, in accordance with Fed. R. Civ. P. 65(b) and Local
4 Rule 7-19.2, the interests of justice require that this Order be granted without prior
5 notice to Defendants. Thus, there is good cause for relieving Plaintiff of the duty
6 to provide Defendants with prior notice of its Motion for a Temporary Restraining
7 Order.

8 G. Good cause exists for freezing the assets of all Defendants, appointing
9 a temporary receiver over the Receivership Entities and over the assets of Jason
10 Cardiff and Eunjung Cardiff, permitting Plaintiff and the Receiver immediate
11 access to the Defendants' business premises, and permitting Plaintiff and the
12 Receiver to take expedited discovery.

13 H. Weighing the equities and considering Plaintiff's likelihood of
14 ultimate success on the merits, a temporary restraining order with an asset freeze,
15 the appointment of a temporary receiver, immediate access to business premises,
16 expedited discovery, and other equitable relief is in the public interest.

17 I. This Court has authority to issue this Order pursuant to Section 13(b)
18 of the FTC Act, 15 U.S.C. § 53(b), Federal Rule of Civil Procedure 65, and the All
19 Writs Act, 28 U.S.C. § 1651.

20 J. No security is required of any agency of the United States for issuance
21 of a temporary restraining order. Fed. R. Civ. P. 65(c).

22 DEFINITIONS

23 For the purpose of this Order, the following definitions shall apply:

24 A. "Asset" means any legal or equitable interest in, right to, or claim to,
25 any property, wherever located and by whomever held.

26 B. "Continuity Program" means any plan, arrangement, or system under
27 which a consumer is periodically charged for products or services, without prior
28 notification by the seller before each charge.

1 C. “Corporate Defendant(s)” means Redwood Scientific Technologies,
2 Inc. (California), Redwood Scientific Technologies, Inc. (Nevada), Redwood
3 Scientific Technologies, Inc. (Delaware), Identify, LLC, Advanced Men’s Institute
4 Prolongz LLC, Run Away Products, LLC, and Carols Place Limited Partnership,
5 and each of their subsidiaries, affiliates, successors, and assigns.

6 D. “Defendant(s)” means Corporate Defendants, Jason Cardiff, Eunjung
7 Cardiff, and Danielle Cadiz, individually, collectively, or in any combination.

8 E. “Document” is synonymous in meaning and equal in scope to the
9 usage of “document” and “electronically stored information” in Federal Rule of
10 Civil Procedure 34(a), Fed. R. Civ. P. 34(a), and includes writings, drawings,
11 graphs, charts, photographs, sound and video recordings, images, Internet sites,
12 web pages, websites, electronic correspondence, including email and instant
13 messages, contracts, accounting data, advertisements, FTP Logs, Server Access
14 Logs, books, written or printed records, handwritten notes, telephone logs,
15 telephone scripts, receipt books, ledgers, personal and business canceled checks
16 and check registers, bank statements, appointment books, computer records,
17 customer or sales databases, and any other electronically stored information,
18 including Documents located on remote servers or cloud computing systems, and
19 other data or data compilations from which information can be obtained directly or,
20 if necessary, after translation into a reasonably usable form. A draft or non-
21 identical copy is a separate document within the meaning of the term.

22 F. “Electronic Data Host” means any person or entity in the business of
23 storing, hosting, or otherwise maintaining electronically stored information. This
24 includes, but is not limited to, any entity hosting a website or server, and any entity
25 providing “cloud based” electronic storage.

26 G. “Individual Defendant(s)” means Jason Cardiff, Eunjung Cardiff, and
27 Danielle Cadiz, individually, collectively, or in any combination.

28 H. “Negative Option” means, in an offer or agreement to sell or provide

1 any good or service, a provision under which the consumer's silence or failure to
2 take an affirmative action to reject a good or service or to cancel the agreement is
3 interpreted by the seller or provider as acceptance or continuing acceptance of the
4 offer or agreement.

5 I. "Person" means a natural person, organization, or other legal entity,
6 including a corporation, partnership, proprietorship, association, cooperative, or
7 any other group or combination acting as an entity.

8 J. "Preauthorized Electronic Fund Transfer" means an electronic fund
9 transfer authorized in advance to recur at substantially regular intervals.

10 K. "Receiver" means the temporary receiver appointed in Section XV of
11 this Order and any deputy receivers that shall be named by the temporary receiver.

12 L. "Receivership Entities" means Corporate Defendants as well as any
13 other entity that has conducted any business related to Defendants' marketing and
14 sale of dissolvable film strips and promotion of the Rengalife multilevel marketing
15 program, including receipt of Assets derived from any activity that is the subject of
16 the Complaint in this matter, and that the Receiver determines is controlled or
17 owned by any Defendant.

18 M. "Receivership Property" means any Assets, wherever located, that are:
19 (1) owned, controlled, or held by or for the benefit of the Receivership Entities,
20 Jason Cardiff, or Eunjung Cardiff, in whole or in part; (2) in the actual or
21 constructive possession of the Receivership Entities, Jason Cardiff, or Eunjung
22 Cardiff; or (3) owned, controlled, or held by, or in the actual or constructive
23 possession of, or otherwise held for the benefit of, any corporation, partnership,
24 trust, or other entity directly or indirectly owned or controlled by the Receivership
25 Entities, Jason Cardiff, or Eunjung Cardiff, including the Jurikel Family Trust, and
26 Carols Place Trust.

27 ORDER

28 I. PROHIBITED BUSINESS ACTIVITIES

1 **IT IS THEREFORE ORDERED** that Defendants, Defendants’ officers,
2 agents, employees, and attorneys, and all other persons in active concert or
3 participation with them, who receive actual notice of this Order by personal service
4 or otherwise, whether acting directly or indirectly, in connection with the
5 advertising, marketing, promoting, or offering for sale of any goods, services, or
6 programs are temporarily restrained and enjoined from misrepresenting or assisting
7 others in misrepresenting, expressly or by implication:

8 A. Any material fact about TBX-FREE, Eupepsia Thin, or Prolongz,
9 including, but not limited to:

- 10 1. That TBX-FREE is an effective smoking cessation product;
- 11 2. That TBX-FREE is more effective than either nicotine patches
12 or nicotine gum in enabling cigarette smokers to stop smoking;
- 13 3. That TBX-FREE enables many cigarette smokers to quit in
14 seven to ten days;
- 15 4. That TBX-FREE has an 88% success rate, including among
16 people who have smoked cigarettes for more than five years;
- 17 5. That smokers should not need to purchase more than one month
18 of TBX-FREE;
- 19 6. That clinical studies have been conducted on TBX-FREE, and
20 have shown that TBX-FREE is an effective smoking cessation
21 product;
- 22 7. That TBX-FREE has been proven in clinical studies to be more
23 effective than nicotine patches or nicotine gum in enabling
24 smokers to stop smoking;
- 25 8. That clinical studies of TBX-FREE conducted on 10,600 people
26 have shown that TBX-FREE has an “88% success rate”;
- 27 9. That The New England Journal of Medicine (“NEJM”),
28 Harvard Health Publications, and Johns Hopkins University

1 have published clinical studies proving that TBX-FREE is an
2 effective smoking cessation product;

3 10. That NEJM's clinical studies showed that TBX-FREE is ten
4 times more effective for smoking cessation than nicotine
5 replacement therapy;

6 11. That Eupepsia Thin is an effective appetite suppressant and
7 weight loss aid;

8 12. That Eupepsia Thin starts working in less than 20 seconds, and
9 suppresses a user's appetite within minutes;

10 13. That Eupepsia Thin enables users to lose 10, 20, or even 100
11 pounds without dieting, giving up their favorite foods, or
12 increasing their exercise;

13 14. That Eupepsia Thin users can lose 15 pounds their first month
14 without dieting or changing their food or lifestyle;

15 15. That Eupepsia Thin users can lose as much as 20 pounds in one
16 month and as much as 50 pounds in three months;

17 16. That Eupepsia Thin is more effective at causing weight loss
18 than conventional calorie reduction and meal plans;

19 17. That Eupepsia Thin enables consumers to avoid gaining back
20 weight they lose, without any lifestyle changes.

21 18. That clinical studies have been conducted on EupepsiaThin and
22 those studies show that it is an effective appetite suppressant
23 and weight loss aid;

24 19. That Prolongz substantially increases ejaculation control and
25 the duration of sex;

26 20. That Prolongz treats or prevents premature ejaculation;

27 21. That Prolongz is clinically proven to increase ejaculation
28 control and the duration of sex for more than 97% of users;

22. That Eupepsia Thin is made in the United States;

23. That individuals appearing in advertising for Eupepsia Thin used that product successfully to lose weight; and

24. That consumers who are not satisfied with the product they purchased will get their money back;

B. Any material fact about any multi-level marketing plan, including, but not limited to, the income that participants in the plan are likely to earn; and

C. Any other fact material to consumers concerning any good or service, such as: the total costs; any material restrictions, limitations, or conditions; or any material aspect of its performance, efficacy, nature, or central characteristics.

II. PROHIBITIONS AGAINST UNFAIR AND DECEPTIVE NEGATIVE OPTION MARKETING PRACTICES

IT IS FURTHER ORDERED that Defendants, Defendants' officers, agents, employees, and attorneys, and all other persons in active concert or participation with any of them, who receive actual notice of this Order, whether acting directly or indirectly, in connection with the sale of any good or service are temporarily restrained and enjoined from charging, causing to be charged, assisting others in charging, or attempting to charge any consumer in any sale of a good or service sold through a negative option without:

A. Clearly and conspicuously disclosing all material terms of the negative option features before obtaining the consumer's billing information;

B. Obtaining a consumer's express informed consent, written or similarly authorized, to the negative option features before making any charge; and

C. Providing a simple mechanism for a consumer to stop recurring charges from being placed on the consumer's credit card, debit card, or other financial account.

1 **III. PROHIBITIONS AGAINST UNAUTHORIZED CHARGES**

2 **IT IS FURTHER ORDERED** that Defendants, Defendants' officers,
3 agents, employees, and attorneys, and all other persons in active concert or
4 participation with any of them, who receive actual notice of this Order, whether
5 acting directly or indirectly, are temporarily restrained and enjoined from charging,
6 causing to be charged, assisting others in charging, or attempting to charge any
7 consumer for any good or service without first obtaining the consumer's express
8 informed consent, written or similarly authorized, to the charge.

9 **IV. PROHIBITIONS AGAINST DEBITING CONSUMERS' BANK**
10 **ACCOUNTS WITHOUT AUTHORIZATION**

11 **IT IS FURTHER ORDERED** that Defendants, Defendants' officers,
12 agents, employees, and attorneys, and all other persons in active concert or
13 participation with any of them, who receive actual notice of this Order, whether
14 acting directly or indirectly, in connection with the sale of any good or service, are
15 temporarily restrained and enjoined from:

16 A. Failing to timely obtain written authorization signed or similarly
17 authenticated by the consumer for any Preauthorized Electronic Fund Transfer
18 from a consumer's account before initiating any Preauthorized Electronic Fund
19 Transfer; and

20 B. Failing to provide to the consumer a copy of a valid written
21 authorization signed or similarly authenticated by the consumer for any
22 Preauthorized Electronic Fund Transfer from a consumer's account.

23
24 **V. PROHIBITION OF PRERECORDED MARKETING CALLS**

25 **IT IS FURTHER ORDERED** that Defendants, Defendants' officers,
26 agents, employees, and attorneys, and all other persons in active concert or
27 participation with any of them, who receive actual notice of this Order, whether
28 acting directly or indirectly, are hereby temporarily restrained and enjoined from

1 initiating or causing the initiation of outbound telephone calls delivering
2 prerecorded messages to induce the sale of goods or services.

3 **VI. PROHIBITION ON RELEASE OF CUSTOMER INFORMATION**

4 **IT IS FURTHER ORDERED** that Defendants, Defendants' officers,
5 agents, employees, and attorneys, and all other persons in active concert or
6 participation with any of them, who receive actual notice of this Order, whether
7 acting directly or indirectly, are hereby temporarily restrained and enjoined from:

8 A. Selling, renting, leasing, transferring, or otherwise disclosing, the
9 name, address, birth date, telephone number, email address, credit card number,
10 bank account number, Social Security number, or other financial or identifying
11 information of any person that any Defendant obtained in connection with any
12 activity that pertains to the subject matter of this Order; and

13 B. Benefitting from or using the name, address, birth date, telephone
14 number, email address, credit card number, bank account number, Social Security
15 number, or other financial or identifying information of any person that any
16 Defendant obtained in connection with any activity that pertains to the subject
17 matter of this Order.

18 Provided, however, that Defendants may disclose such identifying
19 information to a law enforcement agency, to their attorneys as required for their
20 defense, as required by any law, regulation, or court order, or in any filings,
21 pleadings or discovery in this action in the manner required by the Federal Rules of
22 Civil Procedure and by any protective order in the case.

23
24 **VII. ASSET FREEZE**

25 **IT IS FURTHER ORDERED** that Defendants and their officers, agents,
26 employees, and attorneys, and all other persons in active concert or participation
27 with any of them, who receive actual notice of this Order, whether acting directly
28 or indirectly, are hereby temporarily restrained and enjoined from:

1 A. Transferring, liquidating, converting, encumbering, pledging, loaning,
2 selling, concealing, dissipating, disbursing, assigning, relinquishing, spending,
3 withdrawing, granting a lien or security interest or other interest in, or otherwise
4 disposing of any Assets that are:

- 5 1. Owned or controlled, directly or indirectly, by any Defendant,
6 including, but not limited to, those for which a Defendant is a
7 signatory on the account;
- 8 2. Held, in part or in whole, for the benefit of any Defendant;
- 9 3. In the actual or constructive possession of any Defendant; or
- 10 4. Owned or controlled by, in the actual or constructive possession
11 of, or otherwise held for the benefit of, any corporation,
12 partnership, asset protection trust, or other entity that is directly
13 or indirectly owned, managed or controlled by any Defendant.

14 B. Opening or causing to be opened any safe deposit boxes, commercial
15 mail boxes, or storage facilities titled in the name of any Defendant or subject to
16 access by any Defendant, except as necessary to comply with written requests from
17 the Receiver acting pursuant to its authority under this Order;

18 C. Incurring charges or cash advances on any credit, debit, or ATM card
19 issued in the name, individually or jointly, of any Corporate Defendant or any
20 corporation, partnership, or other entity directly or indirectly owned, managed, or
21 controlled by any Defendant, or of which any Defendant is an officer, director,
22 member, or manager. This includes any corporate bankcard or corporate credit
23 card account for which any Defendant is, or was on the date that this Order was
24 signed, an authorized signer; or

25 D. Cashing any checks or depositing any money orders or cash received
26 from consumers, clients, or customers of any Defendant;

27 The Assets affected by this Section shall include: (1) all Assets of Defendants as
28 of the time this Order is entered; and (2) Assets obtained by Defendants after this

1 Order is entered if those Assets are derived from any activity that is the subject of
2 the Complaint in this matter or that is prohibited by this Order; and (3) all Assets
3 owned or controlled, directly or indirectly, by Jason Cardiff, Eunjung Cardiff, the
4 Jurikel Family Trust, or Carols Place Trust. This Section does not prohibit any
5 transfers to the Receiver or repatriation of foreign Assets specifically required by
6 this Order.

7 **VIII. DUTIES OF ASSET HOLDERS AND OTHER THIRD PARTIES**

8 **IT IS FURTHER ORDERED** that any financial or brokerage institution,
9 Electronic Data Host, credit card processor, payment processor, merchant bank,
10 acquiring bank, independent sales organization, third party processor or vendor,
11 payment gateway, insurance company, business entity, or person who receives
12 actual notice of this Order (by service or otherwise) that:

13 (a) has held, controlled, or maintained custody, through an account
14 or otherwise, of any Document on behalf of any Defendant or
15 any Asset that has been owned or controlled, directly or
16 indirectly, by any Defendant; held, in part or in whole, for the
17 benefit of any Defendant; in the actual or constructive
18 possession of any Defendant; or owned or controlled by, in the
19 actual or constructive possession of, or otherwise held for the
20 benefit of, any corporation, partnership, asset protection trust,
21 or other entity that is directly or indirectly owned, managed or
22 controlled by any Defendant;

23 (b) has held, controlled, or maintained custody, through an account
24 or otherwise, of any Document or Asset associated with credits,
25 debits, or charges made on behalf of any Defendant, including
26 reserve funds held by payment processors, credit card
27 processors, merchant banks, acquiring banks, independent sales
28

1 organizations, third party processors or vendors, payment
2 gateways, insurance companies, or other entities; or

3 (c) has extended credit to any Defendant, including through a credit
4 card account, shall:

5 A. Hold, preserve, and retain within its control and prohibit the
6 withdrawal, removal, alteration, assignment, transfer, pledge, encumbrance,
7 disbursement, dissipation, relinquishment, conversion, sale, or other disposal of
8 any such Document or Asset, as well as all Documents or other property related to
9 such Assets, except by further order of this Court;

10 B. Deny any person, except the Receiver, access to any safe deposit box,
11 commercial mail box, or storage facility that is titled in the name of any Defendant,
12 either individually or jointly, or otherwise subject to access by any Defendant;

13 C. Provide Plaintiff's counsel and the Receiver, within three (3) days of
14 receiving a copy of this Order, a sworn statement setting forth:

- 15 1. The identification number of each such account or Asset;
- 16 2. The balance of each such account, or a description of the nature
17 and value of each such Asset as of the close of business on the
18 day on which this Order is served, and, if the account or other
19 Asset has been closed or removed, the date closed or removed,
20 the total funds removed in order to close the account, and the
21 name of the person or entity to whom such account or other
22 Asset was remitted; and
- 23 3. The identification of any safe deposit box, commercial mail
24 box, or storage facility that is either titled in the name,
25 individually or jointly, of any Defendant, or is otherwise subject
26 to access by any Defendant; and

27 D. Upon the request of Plaintiff's counsel or the Receiver, promptly
28 provide Plaintiff's counsel and the Receiver with copies of all records or other

1 Documents pertaining to any account covered by this Section or Asset, including
2 originals or copies of account applications, account statements, signature cards,
3 checks, drafts, deposit tickets, transfers to and from the accounts, including wire
4 transfers and wire transfer instructions, all other debit and credit instruments or
5 slips, currency transaction reports, 1099 forms, and all logs and records pertaining
6 to safe deposit boxes, commercial mail boxes, and storage facilities.

7 Provided, however, that this Section does not prohibit any transfers to the Receiver
8 or repatriation of foreign Assets specifically required by this Order.

9 **IX. FINANCIAL DISCLOSURES**

10 **IT IS FURTHER ORDERED** that each Defendant, within five (5) days of
11 service of this Order upon them, shall prepare and deliver to Plaintiff's counsel and
12 the Receiver:

13 A. Completed financial statements on the forms attached to this Order as
14 **Attachment A** (Financial Statement of Individual Defendant) for each Individual
15 Defendant, and **Attachment B** (Financial Statement of Corporate Defendant) for
16 each Corporate Defendant and for Carols Place Trust and the Jurikel Family Trust;
17 and

18 B. Completed **Attachment C** (IRS Form 4506, Request for Copy of a
19 Tax Return) for each Individual Defendant and Corporate Defendant.

23 **X. FOREIGN ASSET REPATRIATION**

24 **IT IS FURTHER ORDERED** that within five (5) days following the
25 service of this Order, Jason Cardiff, Eunjung Cardiff, Carols Place Trust, and each
26 Corporate Defendant shall:

27 A. Provide Plaintiff's counsel and the Receiver with a full accounting,
28 verified under oath and accurate as of the date of this Order, of all Assets,

1 Documents, and accounts outside of the United States that are: (1) titled in the
2 name, individually or jointly, of any Defendant; (2) held by any person or entity
3 for the benefit of any Defendant or for the benefit of, any corporation, partnership,
4 asset protection trust, or other entity that is directly or indirectly owned, managed
5 or controlled by any Defendant; or (3) under the direct or indirect control, whether
6 jointly or singly, of any Defendant;

7 B. Take all steps necessary to provide the Receiver and Plaintiff's
8 counsel access to all Documents and records that may be held by third parties
9 located outside of the territorial United States of America, including signing the
10 Consent to Release of Financial Records appended to this Order as **Attachment D**.

11 C. Transfer to the territory of the United States and deliver to the
12 Receiver all Documents and Assets located in foreign countries that are: (1) titled
13 in the name, individually or jointly, of any Defendant, or any trust or other entity
14 for which any Defendant is a beneficiary or trustee; (2) held by any person or
15 entity for the benefit of any Defendant or for the benefit of any corporation,
16 partnership, asset protection trust, or other entity that is directly or indirectly
17 owned, managed or controlled by any Defendant; or (3) under the direct or indirect
18 control, whether jointly or singly, of any Defendant; and

19 D. The same business day as any repatriation, (1) notify the Receiver and
20 Plaintiff's counsel of the name and location of the financial institution or other
21 entity that is the recipient of such Documents or Assets; and (2) serve this Order on
22 any such financial institution or other entity.

23 **XI. NON-INTERFERENCE WITH ASSET FREEZE AND**
24 **REPATRIATION**

25 **IT IS FURTHER ORDERED** that Defendants, Defendants' officers,
26 agents, employees, and attorneys, and all other persons in active concert or
27 participation with any of them, who receive actual notice of this Order, whether
28 acting directly or indirectly, are hereby temporarily restrained and enjoined from

1 taking any action, directly or indirectly, which may result in the encumbrance,
2 transfer, relocation, or dissipation of domestic or foreign Assets, or in the
3 hindrance of the repatriation required by this Order, including, but not limited to:

4 A. Sending any communication or engaging in any other act, directly or
5 indirectly, that results in a determination by a foreign trustee or other entity that a
6 “duress” event has occurred under the terms of a foreign trust agreement until such
7 time that all Defendants’ Assets have been fully repatriated pursuant to this Order;
8 or

9 B. Notifying any trustee, protector, or other agent of any foreign trust or
10 other related entities of either the existence of this Order, or of the fact that
11 repatriation is required pursuant to a court order, until such time that all
12 Defendants’ Assets have been fully repatriated pursuant to this Order.

13 **XII. CONSUMER CREDIT REPORTS**

14 **IT IS FURTHER ORDERED** that Plaintiff may obtain credit reports
15 concerning any Defendants pursuant to Section 604(a)(1) of the Fair Credit
16 Reporting Act, 15 U.S.C. 1681b(a)(1), and that, upon written request, any credit
17 reporting agency from which such reports are requested shall provide them to
18 Plaintiff.

19 **XIII. PRESERVATION OF RECORDS**

20 **IT IS FURTHER ORDERED** that Defendants, Defendants’ officers,
21 agents, employees, and attorneys, and all other persons in active concert or
22 participation with any of them, who receive actual notice of this Order, whether
23 acting directly or indirectly, are hereby temporarily restrained and enjoined from:

24 A. Destroying, erasing, falsifying, writing over, mutilating, concealing,
25 altering, transferring, or otherwise disposing of, in any manner, directly or
26 indirectly, Documents that relate to: (1) the business, business practices, Assets, or
27 business or personal finances of any Defendant; (2) the business practices or
28 finances of entities directly or indirectly under the control of any Defendant; or (3)

1 the business practices or finances of entities directly or indirectly under common
2 control with any other Defendant; and

3 B. Failing to create and maintain Documents that, in reasonable detail,
4 accurately, fairly, and completely reflect Defendants' incomes, disbursements,
5 transactions, and use of Defendants' Assets.

6 **XIV. REPORT OF NEW BUSINESS ACTIVITY**

7 **IT IS FURTHER ORDERED** that Defendants, Defendants' officers,
8 agents, employees, and attorneys, and all other persons in active concert or
9 participation with any of them, who receive actual notice of this Order, whether
10 acting directly or indirectly, are hereby temporarily restrained and enjoined from
11 creating, operating, or exercising any control over any business entity, whether
12 newly formed or previously inactive, including any partnership, limited
13 partnership, joint venture, sole proprietorship, or corporation, without first
14 providing Plaintiff's counsel and the Receiver with a written statement disclosing:
15 (1) the name of the business entity; (2) the address and telephone number of the
16 business entity; (3) the names of the business entity's officers, directors, principals,
17 managers, and employees; and (4) a detailed description of the business entity's
18 intended activities.

22 **XV. TEMPORARY RECEIVER**

23 **IT IS FURTHER ORDERED** that Robb Evans & Associates, LLC is
24 appointed as temporary receiver of the Receivership Entities and of the assets of
25 Jason Cardiff and Eunjung Cardiff that are:

- 26 1. Owned, controlled or held by or for the benefit of Jason Cardiff
27 or Eunjung Cardiff, in whole or in part;
28

- 1 2. In the actual or constructive possession of Jason Cardiff or
2 Eunjung Cardiff; or
3 3. Owned, controlled or held by, or in the actual or constructive
4 possession of, or otherwise held for the benefit of, any
5 corporation, partnership, trust, or other entity directly or
6 indirectly owned or controlled by Jason Cardiff or Eunjung
7 Cardiff;

8 with full powers of an equity receiver. The Receiver shall be solely the agent of
9 this Court in acting as Receiver under this Order.

10 **XVI. DUTIES AND AUTHORITY OF RECEIVER**

11 **IT IS FURTHER ORDERED** that the Receiver is directed and authorized
12 to accomplish the following:

13 A. Assume full control of the Receivership Entities by removing, as the
14 Receiver deems necessary or advisable, any director, officer, independent
15 contractor, employee, attorney, or agent of any Receivership Entity from control
16 of, management of, or participation in, the affairs of the Receivership Entity;

17 B. Take exclusive custody, control, and possession of all Assets and
18 Documents of, or in the possession, custody, or under the control of, any
19 Receivership Entity and all Assets of Jason Cardiff and Eunjung Cardiff covered
20 by Part XV of this Order, wherever situated, except for real property used as the
21 residence of Jason Cardiff and Eunjung Cardiff;

22
23 C. Take exclusive custody, control, and possession of all Documents or
24 Assets associated with credits, debits, or charges made on behalf of any
25 Receivership Entity, wherever situated, including reserve funds held by payment
26 processors, credit card processors, merchant banks, acquiring banks, independent
27 sales organizations, third party processors, payment gateways, insurance
28 companies, or other entities;

1 D. Conserve, hold, manage, and prevent the loss of all Receivership
2 Property, and perform all acts necessary or advisable to preserve the value of those
3 Assets. The Receiver shall assume control over the income and profits therefrom
4 and all sums of money now or hereafter due or owing to the Receivership Entities.
5 The Receiver shall have full power to sue for, collect, and receive, all Receivership
6 Property and all Assets of other persons or entities whose interests are now under
7 the direction, possession, custody, or control of, the Receivership Entities or of
8 Jason Cardiff or Eunjung Cardiff. Provided, however, that the Receiver shall not
9 attempt to collect any amount from a consumer if the Receiver believes the
10 consumer's debt to the Receivership Entities has resulted from the deceptive acts
11 or practices or other violations of law alleged in the Complaint in this matter,
12 without prior Court approval;

13 E. Take exclusive custody, control, and possession of the following
14 valuable articles in the possession, custody, or under the control of, Defendants
15 Jason Cardiff, Eunjung Cardiff, or Carols Place Limited Partnership, wherever
16 located:

- 17 1. Ladies 14K yellow gold and diamond ring. Insured for
18 \$11,813.
- 19 2. Ladies diamond pendent setting 14 KT. Insured for \$23,730.
- 20 3. Ladies Diamond Stud Earrings. Insured for \$34,125.
- 21 4. Ladies Diamond Fancy Ring. Insured for \$31,763.
- 22 5. Mens Roadster SM WG/WG Paved Bezel. Insured for
23 \$32,550.
- 24 6. Ladies handmade platinum diamond bracelet. Insured for
25 \$46,725
- 26 7. Mens GTS 18KT white gold Daytona Rolex. Insured for
27 \$42,000.

8. 5.08 ct round diamond I color S12 Clarity EGL platinum ring. Insured for \$102,076.
9. Mens Rolex Yacht-Master 18K gold watch. Insured for \$14,125.
10. Ladies Love Bra yellow gold 4 dia[] 17 cm. Insured for \$9,819.
11. Ladies yellow gold ring, Serial #UD0824. Insured for \$2,284.
12. Ladies fancy diamond bracelet. Insured for \$39,397.
13. Mens Rolex watch 18KT gold Pearlmaster. Insured for \$33,180.
14. Tiffany pearl bracelet. Insured for \$3,166.
15. Ladies emerald and diamond ring. Insured for \$24,856.
16. IWC Portofino moon phase watch. Insured for \$8,000.
17. Pre-owner Ladies stainless steel Patek Phili[pp]. Insured for \$8,145.
18. Rolex Vintage Thund[er]. Insured for \$9,000.
19. Stuart Moore “Aronade” platinum diamond. Insured for \$12,650.
20. Peter Philippe annual calendar wristwatch. Insured for \$41,300.
21. 18K yellow gold Tiffany Diamond Bracelet. #B0164. Insured for \$7,600.
22. “Living Room” Artist Romero Britto. Insured for \$12,600.
23. Hermes Birkin bag, size 35 (Togo leather; in Sienna color). Insured for \$20,000.
24. Hermes Birkin bag, size 35 (Togo leather; Curry). Insured for \$20,000.
25. Ladies ring round center stone 8.5 cts, VS2 with diamonds. Insured for \$532,000.

26. MenOCOs Patek Philippe gold calendar watch model 5035J.
Insured for \$28,500.

Defendants Jason Cardiff and Eunjung Cardiff shall deliver all of the foregoing articles to the Receiver at a place and time to be determined by the Receiver.

F. Obtain, conserve, hold, manage, and prevent the loss of all Documents of the Receivership Entities, and perform all acts necessary or advisable to preserve such Documents. The Receiver shall: divert mail; preserve all Documents of the Receivership Entities that are accessible via electronic means (such as online access to financial accounts and access to electronic documents held onsite or by Electronic Data Hosts, by changing usernames, passwords or other log-in credentials; take possession of all electronic Documents of the Receivership Entities stored onsite or remotely; take whatever steps necessary to preserve all such Documents; and obtain the assistance of the FTC's Digital Forensic Unit for the purpose of obtaining electronic documents stored onsite or remotely.

G. Choose, engage, and employ attorneys, accountants, appraisers, and other independent contractors and technical specialists, as the Receiver deems advisable or necessary in the performance of duties and responsibilities under the authority granted by this Order;

H. Make payments and disbursements from the receivership estate that are necessary or advisable for carrying out the directions of, or exercising the authority granted by, this Order, and to incur, or authorize the making of, such agreements as may be necessary and advisable in discharging his or her duties as Receiver. The Receiver shall apply to the Court for prior approval of any payment of any debt or obligation incurred by the Receivership Entities prior to the date of entry of this Order, except payments that the Receiver deems necessary or advisable to secure Assets of the Receivership Entities, such as rental payments;

1 I. Take all steps necessary to secure and take exclusive custody of each
2 location from which the Receivership Entities operate their businesses. Such steps
3 may include, but are not limited to, any of the following, as the Receiver deems
4 necessary or advisable: (1) securing the location by changing the locks and alarm
5 codes and disconnecting any Internet access or other means of access to the
6 computers, servers, internal networks, or other records maintained at that location;
7 and (2) requiring any persons present at the location to leave the premises, to
8 provide the Receiver with proof of identification, and/or to demonstrate to the
9 satisfaction of the Receiver that such persons are not removing from the premises
10 Documents or Assets of the Receivership Entities, including, but not limited to,
11 telephones, computers, and tablets paid for by the Receivership Entities. Law
12 enforcement personnel, including, but not limited to, police or sheriffs, may assist
13 the Receiver in implementing these provisions in order to keep the peace and
14 maintain security. If requested by the Receiver, the United States Marshal will
15 provide appropriate and necessary assistance to the Receiver to implement this
16 Order and is authorized to use any necessary and reasonable force to do so;

17 J. Take all steps necessary to prevent the modification, destruction, or
18 erasure of any web page or website registered to and operated, in whole or in part,
19 by any Defendants, and to provide access to all such web page or websites to
20 Plaintiff's representatives, agents, and assistants, as well as Defendants and their
21 representatives;

22 K. Enter into and cancel contracts and purchase insurance as advisable or
23 necessary;

24 L. Prevent the inequitable distribution of Assets and determine, adjust,
25 and protect the interests of consumers who have transacted business with the
26 Receivership Entities;

1 M. Make an accounting, as soon as practicable, of the Assets and
2 financial condition of the receivership and file the accounting with the Court and
3 deliver copies thereof to all parties;

4 N. Institute, compromise, adjust, appear in, intervene in, defend, dispose
5 of, or otherwise become party to any legal action in state, federal or foreign courts
6 or arbitration proceedings as the Receiver deems necessary and advisable to
7 preserve or recover the Assets of the Receivership Entities, or to carry out the
8 Receiver's mandate under this Order, including, but not limited to, actions
9 challenging fraudulent or voidable transfers;

10 O. Issue subpoenas to obtain Documents and records pertaining to the
11 Receivership, and conduct discovery in this action on behalf of the receivership
12 estate, in addition to obtaining other discovery as set forth in this Order;

13 P. Open one or more bank accounts at designated depositories for funds
14 of the Receivership Entities. The Receiver shall deposit all funds of the
15 Receivership Entities in such designated accounts and shall make all payments and
16 disbursements from the receivership estate from such accounts. The Receiver shall
17 serve copies of monthly account statements on all parties;

18 Q. Maintain accurate records of all receipts and expenditures incurred as
19 Receiver;

20 R. Allow Plaintiffs' representatives, agents, and assistants, as well as
21 Defendants' representatives and Defendants themselves, reasonable access to the
22 premises of the Receivership Entities, or any other premises where the
23 Receivership Entities conduct business. The purpose of this access shall be to
24 inspect and copy any and all books, records, Documents, accounts, and other
25 property owned by, or in the possession of, the Receivership Entities or their
26 agents. The Receiver shall have the discretion to determine the time, manner, and
27 reasonable conditions of such access;

1 S. Allow Plaintiffs' representatives, agents, and assistants, as well as
2 Defendants and their representatives reasonable access to all Documents in the
3 possession, custody, or control of the Receivership Entities;

4 T. Cooperate with reasonable requests for information or assistance from
5 any state or federal civil or criminal law enforcement agency;

6 U. Suspend business operations of the Receivership Entities if in the
7 judgment of the Receiver such operations cannot be continued legally and
8 profitably;

9 V. If the Receiver identifies a nonparty entity as a Receivership Entity,
10 promptly notify the entity as well as the parties, and inform the entity that it can
11 challenge the Receiver's determination by filing a motion with the Court.
12 Provided, however, that the Receiver may delay providing such notice until the
13 Receiver has established control of the nonparty entity and its assets and records, if
14 the Receiver determines that notice to the entity or the parties before the Receiver
15 establishes control over the entity may result in the destruction of records,
16 dissipation of assets, or any other obstruction of the Receiver's control of the
17 entity;

18 W. If in the Receiver's judgment the business operations cannot be
19 continued legally and profitably, take all steps necessary to ensure that any of the
20 Receivership Entities' web pages or websites relating to the activities alleged in the
21 Complaint cannot be accessed by the public, or are modified for consumer
22 education and/or informational purposes, and take all steps necessary to ensure that
23 any telephone numbers associated with the Receivership Entities cannot be
24 accessed by the public, or are answered solely to provide consumer education or
25 information regarding the status of operations; and

26 X. Report to this Court on or before the date set for the hearing to Show
27 Cause regarding the Preliminary Injunction or as otherwise directed by the Court,
28 regarding: (1) the steps taken by the Receiver to implement the terms of the Order;

1 (2) the value of all assets and sum of all liabilities of the Receivership Entities; (3)
2 the steps the Receiver intends to take in the future to protect receivership assets,
3 recover receivership assets from third parties, and adjust receivership liabilities; (4)
4 the Receiver's opinion on whether any portion of the business of any of the
5 Receivership Entities can continue to operate legally and profitably; and (5) any
6 other matters that the Receiver believes should be brought to the Court's attention.

7 **XVII. TRANSFER OF RECEIVERSHIP PROPERTY TO RECEIVER**

8 **IT IS FURTHER ORDERED** that Defendants and any other person with
9 possession, custody or control of (1) property of, or records relating to, the
10 Receivership Entities or (2) the Assets of Jason Cardiff or Eunjung Cardiff or any
11 trusts for which they are beneficiaries or trustees, shall, upon notice of this Order
12 by personal service or otherwise, fully cooperate with and assist the Receiver in
13 taking and maintaining possession, custody, or control of the Assets and
14 Documents of the Receivership Entities and the Assets of Jason Cardiff or Eunjung
15 Cardiff and immediately provide, transfer, or deliver to the Receiver possession,
16 custody, and control of, the following:

17 A. All Assets held by or for the benefit of the Receivership Entities or of
18 Jason Cardiff or Eunjung Cardiff, except for real property used as the residence of
19 Jason Cardiff and Eunjung Cardiff;

20 B. All Documents or Assets associated with credits, debits, or charges
21 made on behalf of any Receivership Entity, wherever situated, including reserve
22 funds held by payment processors, credit card processors, merchant banks,
23 acquiring banks, independent sales organizations, third party processors, payment
24 gateways, insurance companies, or other entities;

25 C. All Documents of or pertaining to the Receivership Entities or to the
26 Assets of Jason Cardiff or Eunjung Cardiff;

27 D. All computers, electronic devices, mobile devices, and machines used
28 to conduct the business of the Receivership Entities;

1 E. All Assets and Documents belonging to other persons or entities
2 whose interests are under the direction, possession, custody, or control of the
3 Receivership Entities; and

4 F. All keys, codes, user names, passwords, and all other means of
5 authentication necessary to gain or to secure access to any Assets or Documents of
6 or pertaining to the Receivership Entities, including access to their business
7 premises, means of communication, mobile phones, accounts, computer systems
8 (onsite and remote), Electronic Data Hosts, or other property.

9 In the event that any person or entity fails to deliver or transfer any Asset,
10 Document, or otherwise fails to comply with any provision of this Section, the
11 Receiver may file an Affidavit of Non-Compliance regarding the failure and a
12 motion seeking compliance or a contempt citation.

13 **XVIII. PROVISION OF INFORMATION TO RECEIVER**

14 **IT IS FURTHER ORDERED** that Receivership Entities and Jason Cardiff
15 and Eunjung Cardiff shall immediately provide to the Receiver:

16 A. A list of all Assets and accounts of the Receivership Entities that are
17 held in any name other than the name of a Receivership Entity, or by any person or
18 entity other than a Receivership Entity;

19 B. A list of all Assets and accounts of Jason Cardiff and Eunjung Cardiff
20 that are held in any name other than their own names, or by any person or entity
21 other than themselves;

22 C. A list of all agents, employees, officers, attorneys, servants and those
23 persons in active concert and participation with the Receivership Entities, or who
24 have been associated or done business with the Receivership Entities; and

25 D. A description of any documents covered by attorney-client privilege
26 or attorney work product, including files where such documents are likely to be
27 located, authors or recipients of such documents, and search terms likely to
28 identify such electronic documents.

1 **XIX. COOPERATION WITH THE RECEIVER**

2 **IT IS FURTHER ORDERED** that Defendants, Receivership Entities,
3 Defendants' or Receivership Entities' officers, agents, employees, and attorneys,
4 all other persons in active concert or participation with any of them, and any other
5 person with possession, custody, or control of:

6 1. Receivership Property or records relating to Receivership
7 Property; or

8 2. Other records relating to the Receivership Entities;

9 who receive actual notice of this Order shall fully cooperate with and assist the
10 Receiver. This cooperation and assistance shall include, but is not limited to,
11 providing information to the Receiver that the Receiver deems necessary to
12 exercise the authority and discharge the responsibilities of the Receiver under this
13 Order; providing any keys, codes, user names, passwords, and all other means
14 required to access any computers, electronic devices, mobile devices, machines
15 (onsite or remotely), and any cloud account (including specific method to access
16 account) or electronic file in any medium; advising all persons who owe money to
17 any Receivership Entity that all debts should be paid directly to the Receiver; and
18 transferring funds at the Receiver's direction and producing records related to the
19 Receivership Property and sales of the Receivership Entities.

20 **XX. NON-INTERFERENCE WITH THE RECEIVER**

21 **IT IS FURTHER ORDERED** that Defendants, Receivership Entities,
22 Defendants' or Receivership Entities' officers, agents, employees, attorneys, and
23 all other persons in active concert or participation with any of them, who receive
24 actual notice of this Order, and any other person served with a copy of this Order,
25 are hereby restrained and enjoined from directly or indirectly:

26 A. Interfering with the Receiver's efforts to manage, or take custody,
27 control, or possession of, the Assets or Documents subject to the receivership;

28 B. Transacting any of the business of the Receivership Entities;

1 C. Transferring, receiving, altering, selling, encumbering, pledging,
2 assigning, liquidating, or otherwise disposing of any Assets owned, controlled, or
3 in the possession or custody of, or in which an interest is held or claimed by, the
4 Receivership Entities, Jason Cardiff, or Eunjung Cardiff; or

5 D. Refusing to cooperate with the Receiver or the Receiver's duly
6 authorized agents in the exercise of their duties or authority under any order of this
7 Court.

8 **XXI. STAY OF ACTIONS**

9 **IT IS FURTHER ORDERED** that, except by leave of this Court, during
10 the pendency of the receivership ordered herein, Defendants, Defendants' officers,
11 agents, employees, attorneys, and all other persons in active concert or
12 participation with any of them, who receive actual notice of this Order, and their
13 corporations, subsidiaries, divisions, or affiliates, and all investors, creditors,
14 stockholders, lessors, customers and other persons seeking to establish or enforce
15 any claim, right, or interest against or on behalf of Defendants, and all others
16 acting for or on behalf of such persons, are hereby enjoined from taking action that
17 would interfere with the exclusive jurisdiction of this Court over the Assets or
18 Documents of the Receivership Entities or over the assets of Jason Cardiff and
19 Eunjung Cardiff, including, but not limited to:

20 A. Filing or assisting in the filing of a petition for relief under the
21 Bankruptcy Code, 11 U.S.C. § 101 et seq., or of any similar insolvency proceeding
22 on behalf of the Receivership Entities;

23 B. Commencing, prosecuting, or continuing a judicial, administrative, or
24 other action or proceeding against the Receivership Entities, including the issuance
25 or employment of process against the Receivership Entities, except that such
26 actions may be commenced if necessary to toll any applicable statute of
27 limitations;

1 C. Filing or enforcing any lien on any Asset of the Receivership Entities,
2 taking or attempting to take possession, custody, or control of any Asset of the
3 Receivership Entities, Jason Cardiff, or Eunjung Cardiff; or attempting to
4 foreclose, forfeit, alter, or terminate any interest in any Asset of the Receivership
5 Entities, Jason Cardiff, or Eunjung Cardiff, whether such acts are part of a judicial
6 proceeding, are acts of self-help, or otherwise.

7 Provided, however, that this Order does not stay: (1) the commencement or
8 continuation of a criminal action or proceeding; (2) the commencement or
9 continuation of an action or proceeding by a governmental unit to enforce such
10 governmental unit's police or regulatory power; or (3) the enforcement of a
11 judgment, other than a money judgment, obtained in an action or proceeding by a
12 governmental unit to enforce such governmental unit's police or regulatory power.

13 **XXII.COMPENSATION OF RECEIVER**

14 **IT IS FURTHER ORDERED** that the Receiver and all personnel hired by
15 the Receiver as herein authorized, including counsel to the Receiver and
16 accountants, are entitled to reasonable compensation for the performance of duties
17 pursuant to this Order and for the cost of actual out-of-pocket expenses incurred by
18 them, from the Assets now held by, in the possession or control of, or which may
19 be received by, the Receivership Entities, Jason Cardiff, or Eunjung Cardiff. The
20 Receiver shall file with the Court and serve on the parties periodic requests for the
21 payment of such reasonable compensation, with the first such request filed no more
22 than sixty (60) days after the date of entry of this Order. The Receiver shall not
23 increase the hourly rates used as the bases for such fee applications without prior
24 approval of the Court.

1 **XXIII. RECEIVER'S BOND**

2 **IT IS FURTHER ORDERED** that the Receiver shall file with the Clerk of
3 this Court a bond in the sum of \$15,000 with sureties to be approved by the Court,
4 conditioned that the Receiver will well and truly perform the duties of the office
5 and abide by and perform all acts the Court directs. 28 U.S.C. § 754.

6 **XXIV. IMMEDIATE ACCESS TO BUSINESS PREMISES AND RECORDS**

7 **IT IS FURTHER ORDERED** that:

8 A. In order to allow Plaintiff and the Receiver to preserve Assets and
9 evidence relevant to this action and to expedite discovery, Plaintiff and the
10 Receiver, and their representatives, agents, contractors, and assistants, shall have
11 immediate access to the business premises and storage facilities, owned,
12 controlled, or used by the Receivership Entities. Such locations include, but are
13 not limited to: 820 North Mountain Ave., Suite 100, Upland, CA 91786; 870
14 North Mountain Ave., Suites 115 and 118, Upland, CA 91786; any additional
15 business locations if they are discovered during the immediate access, and any
16 offsite location or commercial mailbox used by the Receivership Entities. The
17 Receiver may exclude Defendants, Receivership Entities, and their employees
18 from the business premises during the immediate access.

19 B. Plaintiff and the Receiver, and their representatives, agents,
20 contractors, and assistants, are authorized to remove Documents from the
21 Receivership Entities' premises in order that they may be inspected, inventoried,
22 and copied. Plaintiff shall return any removed materials to the Receiver within
23 five (5) business days of completing inventorying and copying, or such time as is
24 agreed upon by Plaintiff and the Receiver;

25 C. Plaintiff's access to the Receivership Entities' documents pursuant to
26 this Section shall not provide grounds for any Defendant to object to any
27 subsequent request for documents served by Plaintiff.
28

1 D. Plaintiff and the Receiver, and their representatives, agents,
2 contractors, and assistants, are authorized to obtain the assistance of federal, state
3 and local law enforcement officers as they deem necessary to effect service and to
4 implement peacefully the provisions of this Order;

5 E. If any Documents, computers, or electronic storage devices containing
6 information related to the business practices or finances of the Receivership
7 Entities are at a location other than those listed herein, including personal
8 residence(s) of any Defendant, then, immediately upon receiving notice of this
9 order, Defendants and the Receivership Entities shall produce to the Receiver all
10 such Documents, computers, and electronic storage devices, along with any codes
11 or passwords needed for access. In order to prevent the destruction of computer
12 data, upon service of this Order, any such computers or electronic storage devices
13 shall be powered down in the normal course of the operating system used on such
14 devices and shall not be powered up or used until produced for copying and
15 inspection; and

16 F. If any communications or records of any Receivership Entity are
17 stored with an Electronic Data Host, such Entity shall, immediately upon receiving
18 notice of this order, provide the Receiver with the username, passwords, and any
19 other login credential needed to access the communications and records, and shall
20 not attempt to access, or cause a third party to attempt to access, the
21 communications or records.

22 **XXV. DISTRIBUTION OF ORDER BY DEFENDANTS**

23 **IT IS FURTHER ORDERED** that Defendants shall immediately provide a
24 copy of this Order to each affiliate, telemarketer, marketer, sales entity, successor,
25 assign, member, officer, director, employee, agent, independent contractor, client,
26 attorney, spouse, subsidiary, division, and representative of any Defendant, and
27 shall, within ten (10) days from the date of entry of this Order, provide Plaintiff
28 and the Receiver with a sworn statement that this provision of the Order has been

1 satisfied, which statement shall include the names, physical addresses, phone
2 number, and email addresses of each such person or entity who received a copy of
3 the Order. Furthermore, Defendants shall not take any action that would
4 encourage officers, agents, members, directors, employees, salespersons,
5 independent contractors, attorneys, subsidiaries, affiliates, successors, assigns or
6 other persons or entities in active concert or participation with them to disregard
7 this Order or believe that they are not bound by its provisions.

8 **XXVI. EXPEDITED DISCOVERY**

9 **IT IS FURTHER ORDERED** that, notwithstanding the provisions of Fed.
10 R. Civ. P. 26(d) and (f) and 30(a)(2)(A)(iii), and pursuant to Fed. R. Civ. P. 30(a),
11 34, and 45, Plaintiff and the Receiver are granted leave, at any time after service of
12 this Order, to conduct limited expedited discovery for the purpose of discovering:
13 (1) the nature, location, status, and extent of Defendants' Assets; or (2) compliance
14 with this Order. The limited expedited discovery set forth in this Section shall
15 proceed as follows:

16 A. Plaintiff and the Receiver may take the deposition of parties and non-
17 parties. Forty-eight (48) hours notice shall be sufficient notice for such
18 depositions. The limitations and conditions set forth in Rules 30(a)(2)(B) and
19 31(a)(2)(B) of the Federal Rules of Civil Procedure regarding subsequent
20 depositions of an individual shall not apply to depositions taken pursuant to this
21 Section. Any such deposition taken pursuant to this Section shall not be counted
22 towards the deposition limit set forth in Rules 30(a)(2)(A) and 31(a)(2)(A) and
23 depositions may be taken by telephone or other remote electronic means.

24 B. Plaintiff and the Receiver may serve upon parties requests for
25 production of Documents or inspection that require production or inspection within
26 five (5) days of service, provided, however, that three (3) days of notice shall be
27 deemed sufficient for the production of any such Documents that are maintained or
28 stored only in an electronic format.

1 C. Plaintiff and the Receiver may serve upon parties interrogatories that
2 require response within five (5) days after Plaintiff serves such interrogatories.

3 D. Plaintiff and the Receiver may serve subpoenas upon non-parties that
4 direct production or inspection within five (5) days of service.

5 E. Service of discovery upon a party to this action, taken pursuant to this
6 Section, shall be sufficient if made by facsimile, email, or by overnight delivery.

7 F. Any expedited discovery taken pursuant to this Section is in addition
8 to, and is not subject to, the limits on discovery set forth in the Federal Rules of
9 Civil Procedure and the Local Rules of this Court. The expedited discovery
10 permitted by this Section does not require a meeting or conference of the parties,
11 pursuant to Rules 26(d) & (f) of the Federal Rules of Civil Procedure.

12 G. The Parties are exempted from making initial disclosures under Fed.
13 R. Civ. P. 26(a)(1) until further order of this Court.

14 **XXVII. SERVICE OF THIS ORDER**

15 **IT IS FURTHER ORDERED** that copies of this Order as well as
16 Plaintiff's *Ex Parte* Application For (1) A Temporary Restraining Order And
17 Order To Show Cause Why A Preliminary Injunction Should Not Issue And (2)
18 Order Waiving Notice Requirement and all other pleadings, Documents, and
19 exhibits filed contemporaneously with that Application (other than the complaint
20 and summons), may be served by any means, including facsimile, electronic mail
21 or other electronic messaging, personal or overnight delivery, U.S. Mail or FedEx,
22 by agents and employees of Plaintiff, by any law enforcement agency, or by
23 private process server, upon any Defendant or any person (including any financial
24 institution) that may have possession, custody or control of any Asset or Document
25 of any Defendant, or that may be subject to any provision of this Order pursuant to
26 Rule 65(d)(2) of the Federal Rules of Civil Procedure. For purposes of this
27 Section, service upon any branch, subsidiary, affiliate or office of any entity shall
28 effect service upon the entire entity.

1 **XXVIII. CORRESPONDENCE AND SERVICE ON PLAINTIFF**

2 **IT IS FURTHER ORDERED** that, for the purpose of this Order, all
3 correspondence and service of pleadings on Plaintiff shall be addressed to:

4 Elizabeth Sanger
5 James A. Prunty
6 Edwin Rodriguez
7 Shira D. Modell
8 Federal Trade Commission
9 600 Pennsylvania Ave., NW
10 Washington, DC 20580
11 Tel: (202) 326-2757, -2438, -3147, -3116
Fax: (202) 326-3259
Email: esanger@ftc.gov; jprunty@ftc.gov; erodriguez@ftc.gov;
smodell@ftc.gov

12 **XXIX. PRELIMINARY INJUNCTION HEARING**

13 **IT IS FURTHER ORDERED** that, pursuant to Fed. R. Civ. P. 65(b),
14 Defendants shall appear before this Court on the 23rd day of October, 2018, at
15 2:00 p.m. to show cause, if there is any, why this Court should not enter a
16 preliminary injunction, pending final ruling on the Complaint against Defendants,
17 enjoining the violations of the law alleged in the Complaint, continuing the freeze
18 of the Defendants' Assets, continuing the receivership, and imposing such
19 additional relief as may be appropriate.

20 **XXX. BRIEFS AND AFFIDAVITS CONCERNING PRELIMINARY**
21 **INJUNCTION**

22 **IT IS FURTHER ORDERED** that:

23 A. Defendants shall file with the Court and serve on Plaintiff's counsel
24 any answering pleadings, affidavits, motions, expert reports or declarations, or
25 legal memoranda no later than **four (4) days** prior to the order to show cause
26 hearing scheduled pursuant to this Order. Plaintiff may file responsive or
27 supplemental pleadings, materials, affidavits, or memoranda with the Court and
28 serve the same on counsel for Defendants no later than **one (1) day** prior to the

1 order to show Cause hearing. Provided that such affidavits, pleadings, motions,
2 expert reports, declarations, legal memoranda, or oppositions must be served by
3 personal or overnight delivery, facsimile or email, and be received by the other
4 party or parties no later than 5:00 p.m. Pacific Time on the appropriate dates set
5 forth in this Section.

6 B. An evidentiary hearing on Plaintiff's request for a preliminary
7 injunction is not necessary unless Defendants demonstrate that they have, and
8 intend to introduce, evidence that raises a genuine and material factual issue. The
9 question of whether this Court should enter a preliminary injunction shall be
10 resolved on the pleadings, declarations, exhibits, and memoranda filed by, and oral
11 argument of, the parties. Live testimony shall be heard only on further order of
12 this Court. Any motion to permit such testimony shall be filed with the Court and
13 served on counsel for the other parties at least five (5) days prior to the preliminary
14 injunction hearing in this matter. Such motion shall set forth the name, address,
15 and telephone number of each proposed witness, a detailed summary or affidavit
16 revealing the substance of each proposed witness's expected testimony, and an
17 explanation of why the taking of live testimony would be helpful to this Court.
18 Any papers opposing a timely motion to present live testimony or to present live
19 testimony in response to another party's timely motion to present live testimony
20 shall be filed with this Court and served on the other parties at least three (3) days
21 prior to the order to show cause hearing.

22 Provided, however, that service shall be performed by personal or overnight
23 delivery, facsimile, or email, and Documents shall be delivered so that they shall
24 be received by the other parties no later than 5:00 p.m. Pacific Time on the
25 appropriate dates provided in this Section.
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1 **XXXI. DURATION OF THE ORDER**

2 **IT IS FURTHER ORDERED** that this Order shall expire fourteen (14)
3 days from the date of entry noted below, unless within such time, the Order is
4 extended for an additional period pursuant to Fed. R. Civ. P. 65(b)(2).

5 **XXXII. RETENTION OF JURISDICTION**

6 **IT IS FURTHER ORDERED** that this Court shall retain jurisdiction of
7 this matter for all purposes.

8 SO ORDERED, this 10th day of October, 2018 @ 3:00 p.m.

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11 _____
12 UNITED STATES DISTRICT JUDGE
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ATTACHMENT AA



Golden Sunrise Nutraceutical

155 subscribers



SUBSCRIBE

- HOME
- VIDEOS
- PLAYLISTS
- CHANNELS
- DISCUSSION
- ABOUT



Uploads



PLAY ALL



0:36

Aisam ul Haq QURESHI

91 views • 9 months ago



Li Zhe Professional Tennis Player 1:10

Li Zhe Tennis Golden Sunrise Nutraceutical in English

141 views • 1 year ago



Li Zhe Professional Tennis Player 1:07

Li Zhe Tennis Golden Sunrise Nutraceutical in Chinese

90 views • 1 year ago



16:14

Cancer Breakthroughs, Another Cancer Patient...

1.3K views • 2 years ago



2:45

Cancer Breakthroughs, Cancer Patient Successful...

702 views • 2 years ago

Attachment BB

Keller, Zachary A.

From: Huu Tieu <htieu@goldensunrisenutraceutical.com>
Sent: Sunday, May 31, 2020 6:16 PM
To: Keller, Zachary A.
Subject: Re: Golden Sunrise Nutraceutical / Pharmaceutical Information

Hello Mr. Keller,

We have removed the claim from our website as shown in your screenshot. For the claim made in the Facebook post, we have attempted to identify and remove it and have discovered that it is on a Facebook page we did not create. As we have not created this page, we do not have administrative privileges and cannot remove it. Someone seems to have created an impersonation of us.

This is the impersonating page: <https://www.facebook.com/GoldenSunriseNutraceutical/>
This is our page: <https://www.facebook.com/Golden-Sunrise-Nutraceutical-115221453185810/>

Our page was created on September 1, 2019, whereas the impersonating page was created on February 27, 2020.



Attachment BB



We have reported this page to Facebook for removal as seen here and await a response. Do you have any further recommendations on how to proceed in this situation?



Huu S. TIEU
Golden Sunrise Nutraceutical, Inc.
P.O. Box 510
PORTERVILLE, CA 93258
Phone No.: 1.559.781.0658
Fax No.: 1.559.615.1268

From: Keller, Zachary A. <zkeller@ftc.gov>
Sent: Monday, 18 May 2020 2:44 PM

Attachment BB

To: Huu Tieu <htieu@goldensunrisenutraceutical.com>

Subject: RE: Golden Sunrise Nutraceutical / Pharmaceutical Information

Dear Mr. Tieu,

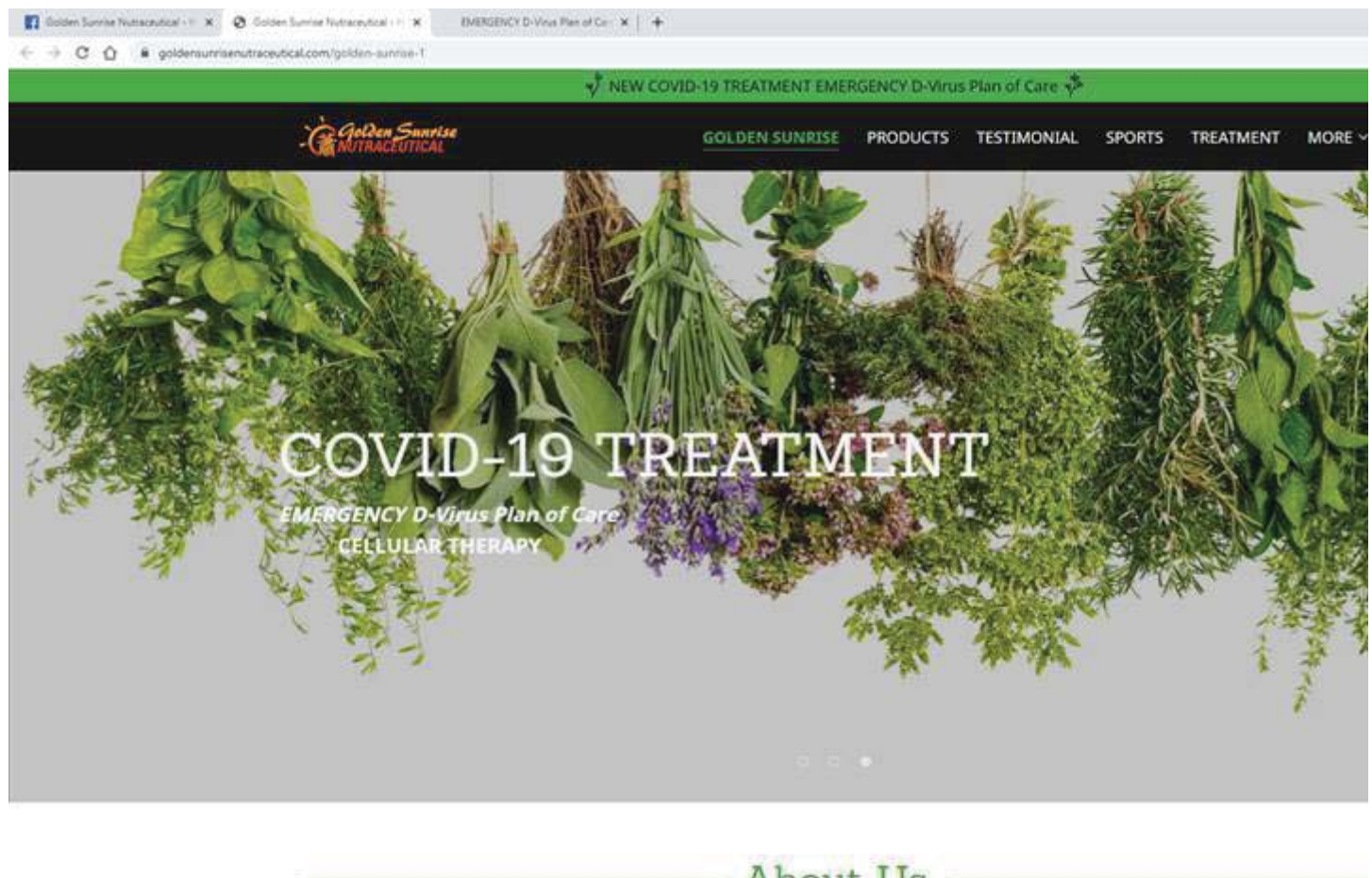
Thank you for your letter. To answer your questions:

The documentation you submitted was insufficient for two reasons. First, the FDA has not approved your product for any use associated with COVID-19. Second, even if you had received emergency use authorization for the product, those emergency use provisions expressly prohibit vendors from claiming in their marketing materials that the authorized treatments are effective or safe.

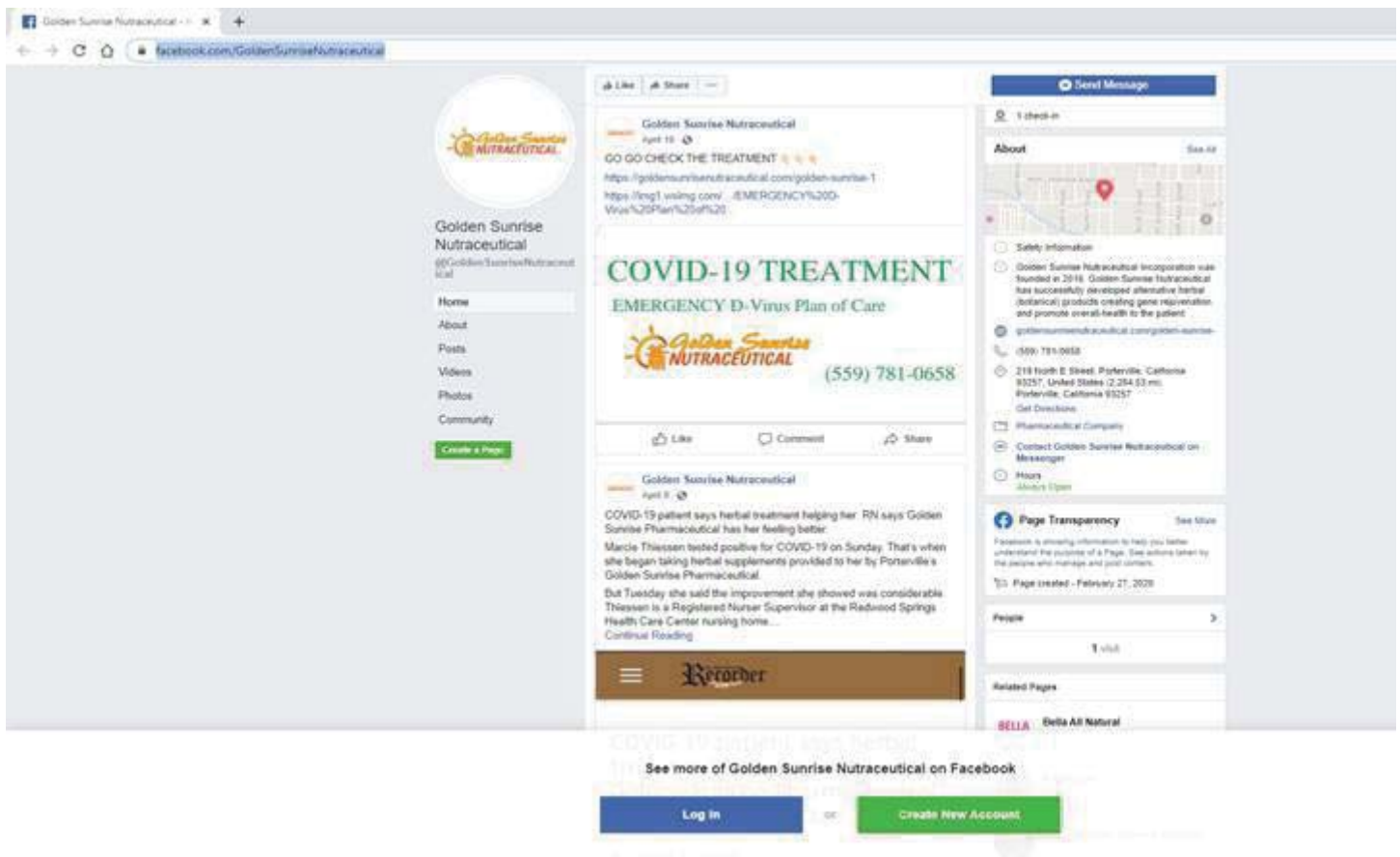
In fact, the materials you sent did not contain any representation from the FDA at all. Instead, they were only patient reports and letters you sent to the FDA. These are not sufficient, and your description of several patients you have treated does not provide the appropriate substantiation for the type of claim you are making. If you would like further guidance regarding health claims, you can review our guidance materials [here](#).

Moreover, we have noted that you have continued to market your product as preventing or curing COVID-19 on both your Golden Sunrise Nutraceutical website and your Facebook page (see images below). These, like the other claims, are actionable under the FTC Act. Simply put, there is currently no approved treatment or cure for COVID-19, including the "Emergency D" plan you are describing, and every representation you make regarding your product preventing, curing, or treating COVID-19 must be removed.

Let me be perfectly clear: **you must remove all claims regarding COVID-19 immediately**. We have fully explained our position, and it is imperative that you adhere to the rules governing marketing the products you are selling.



Attachment BB



Best,
Zachary A. Keller
Attorney
Federal Trade Commission
Southwest Region
1999 Bryan St. Suite 2150
Dallas, TX 75201
214-979-9382
zkeller@ftc.gov

From: Huu Tieu <htieu@goldensunrisenutraceutical.com>
Sent: Friday, May 15, 2020 7:51 PM
To: Keller, Zachary A. <zkeller@ftc.gov>
Cc: Elliott, James E. <JELLIOTT@ftc.gov>
Subject: Re: Golden Sunrise Nutraceutical / Pharmaceutical Information

Hello Mr. Keller,

Please find enclosed an attachment Golden Sunrise Nutraceutical letter to you dated May 15, 2020. Thank you.

Huu S. TIEU

Attachment BB

From: Keller, Zachary A. <zkeller@ftc.gov>
Sent: Tuesday, 12 May 2020 4:29 PM
To: Huu Tieu <htieu@goldensunrisenutraceutical.com>
Subject: RE: Golden Sunrise Nutraceutical / Pharmaceutical Information

Dear Mr. Tieu,

Thank you for responding to our warning letter once you became aware of it, and thank you for taking the time to discuss with me yesterday.

With regard to the materials you submitted, I'm afraid that none of them provide any substantiation for the claims your advertising contained. Instead, they are letters petitioning the FDA for approval. In addition, the "Emergency Use" policies you described on our call and provided in the attached do not bear on whether you can market a given product as a method of preventing, treating, or curing COVID-19.

While we appreciate that you are trying to work with the FDA to get approval to market your supplement as a remedy for COVID-19, your doing so does not make it appropriate or legal for you to market or advertise those products as preventing, treating, or curing COVID-19. Moreover, I should caution you that even if the FDA does provide you an emergency use authorization, those authorizations prohibit firms from claiming in marketing materials that the authorized treatments are effective or safe. As a result, I must **repeat our letter's demand that you not make such claims in your marketing and advertising**: you cannot market products or services as curing, treating, or preventing COVID-19.

So while we understand that you are interested in helping your community at this time, we must insist that you not re-post any of the marketing materials that you took down in response to our letter. The FTC has placed a high priority on compliance with these letters and will continue to monitor recipients' marketing materials moving forward.

Thank you again for your time yesterday and for taking the time to engage with us about this issue—we greatly appreciate it.

Best,
Zachary A. Keller
Attorney
Federal Trade Commission
Southwest Region
1999 Bryan St. Suite 2150
Dallas, TX 75201
214-979-9382
zkeller@ftc.gov

From: Huu Tieu <htieu@goldensunrisenutraceutical.com>
Sent: Monday, May 11, 2020 5:23 PM
To: Keller, Zachary A. <zkeller@ftc.gov>
Subject: Golden Sunrise Nutraceutical / Pharmaceutical Information

Hello Mr. Keller,

In our telephone conversation today, please find enclosed the attachments.

1. Golden Sunrise Nutraceutical letter to James E. ELLIOTT
2. Emergency Use of a Test Article

Attachment BB

3. Golden Sunrise Nutraceutical letter to FDA & Protocol Plan of Care
4. Golden Sunrise Nutraceutical letter to FDA & Patient Results
5. [REDACTED] Medical Report
6. [REDACTED] Medical Report
7. [REDACTED] Medical Report
8. [REDACTED] Z Medical Report

<https://www.fda.gov/vaccines-blood-biologics/cellular-gene-therapy-products/regenerative-medicine-advanced-therapy-designation>



Regenerative Medicine Advanced Therapy Designation | FDA

As described in Section 3033 of the 21 st Century Cures Act, a drug is eligible for regenerative medicine advanced therapy (RMAT) designation if:. The drug is a regenerative medicine therapy ...

www.fda.gov

If you have any questions, please do not hesitate in giving me a call direct number **1.559.361.0097**. Thank you.

Huu S. TIEU, President
Golden Sunrise Nutraceutical, Inc.
P.O. Box 510
PORTERVILLE, CA 93258
Phone No.: 1.559.781.0658
Fax No.: 1.559.615.1268

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Executed on July 10, 2020.

Blair Looney

Blair Looney, President and CEO
Better Business Bureau Serving Central California &
Inland Empire Counties

ATTACHMENT A



ATTACHMENT B



ATTACHMENT C



ATTACHMENT D



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1 3. A product is “approved by the FDA” for the treatment of COVID-19, cancer, or
2 Parkinson’s disease only if it is the subject of an approved NDA, ANDA, or BLA with respect to
3 the specific disease or medical condition described in the application.

4 4. Similarly, an IND to conduct a clinical trial using a specific drug to treat a specific
5 medical condition is effective only if it has been accepted by FDA and is not the subject of a clinical
6 hold.

7
8 5. By training and experience, I understand the data structure for application(s)
9 submissions received by the agency and tracked in DARRTS and know how to search for and locate
10 specific sponsor submitted documents, internal review communications, and external agency
11 communications to the sponsor.

12 6. On July 30, 2020, at my direction, FDA employees similarly and appropriately
13 trained and experienced in the data structure, tracking, and searching of DARRTS conducted a
14 search of the official FDA records in DARRTS to determine whether any IND, NDA, ANDA, or
15 BLA has been approved for any drug or biologic, for any of the following entities or individuals
16 (collectively, “Golden Sunrise”):

- 17
18 a. Golden Sunrise Nutraceutical, Inc.;
- 19 b. Golden Sunrise Pharmaceutical, Inc.;
- 20 c. Huu Tieu; and
- 21 d. Stephen Meis.

22
23 7. A diligent search of the FDA’s official records for the Golden Sunrise names
24 revealed that none of these individuals or entities has ever had an IND in effect, or NDA, ANDA, or
25 BLA approved, for any product pursuant to 21 U.S.C. § 355 or 42 U.S.C. § 262.

1
2 I declare under penalty of perjury that the foregoing is true and correct.

3 Executed on July 30, 2020.
4

5
6 **Howard R. Philips** -S
Digitally signed by Howard R. Philips -S
DN: c=US, o=U.S. Government, ou=HHS, ou=FDA, ou=People,
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Howard R. Philips
Supervisory Regulatory Counsel
Division of Information Disclosure Policy
Office of Regulatory Policy
Center for Drug Evaluation and Research
U.S. Food and Drug Administration

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1 **DECLARATION OF RICHARD BRUCE VAN BREEMEN, Ph.D.**

2 **Pursuant to 28 U.S.C. § 1746**

3 Pursuant to 28 U.S.C. § 1746, I declare as follows:

4 1. My name is Richard Bruce van Breemen, Ph.D. I am a United States citizen over
5 the age of 18 and make this Declaration based upon my personal knowledge and, if called, I
6 would testify to the same.

7
8 2. This declaration is made in support of an application by the Federal Trade
9 Commission ("FTC") for injunctive and other equitable relief against Golden Sunrise
10 Nutraceutical, Inc., Golden Sunrise Pharmaceutical, Inc., Huu Tieu, and Stephen Meis
11 (collectively, "Golden Sunrise"). I have personal knowledge of the matters contained herein and,
12 if called as a witness, I could and would competently testify as to them.

13 **QUALIFICATIONS, COMPENSATION, AND TESTIMONIAL**

14 **EXPERIENCE**

15
16 3. As detailed in my *curriculum vitae*, a true, correct, and complete copy of which is
17 attached as **Attachment A**, I hold a Ph.D. in Pharmacology and currently serve as Professor of
18 Pharmaceutical Sceinces in the College of Pharmacy and as a Principal Investigator of the Linus
19 Pauling Institute at Oregon State University.

20
21 4. My responsibilities in these positions include teaching pharmaceutical sciences,
22 supervising graduate and post-doctoral pharmaceutical science students, and directing and
23 leading investigations and studies into the role that vitamins, essential minerals, and chemicals
24 from plants play in human ageing, immune function, and chronic disease processes.

1 5. Other than this declaration, I have testified as an expert pharmacology or
2 analytical chemistry witness nine (9) times over the past 22 years. *See* Attachment (“Att”) A at
3 105-06 (Appendix (“App.”) 627-28)).

4 6. I obtained my B.A. in Chemistry, with honors, from Oberlin College in 1980. In
5 1985, I obtained my Ph.D. in Pharmacology from the Johns Hopkins University School of
6 Medicine, followed by a one year postdoctoral fellowship, also at the Johns Hopkins University
7 School of Medicine. *Id.* at 1 (App. 523).

8 7. After my postdoctoral fellowship, I served as an Assistant Professor of Chemistry,
9 Member of the Biotechnology Faculty, and Director of a Mass Spectrometry Laboratory for
10 Biotechnology Research at North Carolina State University from 1986 until 1993. *Id.* at 2 (App.
11 524).

12 8. From 1994 until 2000, I was Associate Professor of Medicinal Chemistry and
13 Pharmacognosy at the University of Illinois College of Pharmacy. In 2000, I became full
14 Professor of Medicinal Chemistry and Pharmacognosy at the University of Illinois College of
15 Pharmacy. *Id.*

16 9. From 2011 until 2018, I also served as the Director of UIC/NIH Center for
17 Botanical Dietary Supplements Research, University of Illinois at Chicago. *Id.* at 1 (App. 523).

18 10. In 2018, I took on my current roles as a Professor of Pharmaceutical Sciences and
19 Principal Investigator of the Linus Pauling Institute at Oregon State University. *Id.*

20 11. I have authored or co-authored, and published, over 300 peer-reviewed articles,
21 primarily in the areas of chemistry, medicinal chemistry, drug development, pharmacognosy, and
22 pharmacology as described in my *curriculum vitae*. *See id.* at 3-32 (App. 525-54).

1 12. I am currently conducting National Institutes of Health sponsored research into
2 botanical dietary supplementation. My peer-reviewed research grants are described further in my
3 *curriculum vitae*. *See id.* at 117 (App. 639).

4 13. Throughout my career, I have served as the Editor-in-Chief or on the Editorial
5 Board of several pharmacological and chemistry journals, including being on the Editorial Board
6 of *Assay and Drug Development Technologies* since 2010 and the *Journal of the AOAC*
7 *International* since 2016. *Id.* at 1 (App. 523). I have also supervised over 80 graduate students
8 and postdoctoral fellows in the areas of medicinal chemistry, chemistry, pharmacognosy, and
9 pharmaceutical sciences during my career. *Id.* at 35-39 (App. 557-68).

10 14. I make approximately 15 presentations a year at scientific meetings and have
11 spoken publicly and to the media on numerous occasions on the topics of herbal therapy and
12 botanical dietary supplements. *Id.* at 73 (App. 595).

13 15. Based upon my education, training, and experience, as summarized above, I
14 consider myself to be an expert in the fields of pharmacology, medicinal chemistry, and
15 pharmacognosy with a comprehensive knowledge in the safety and efficacy of dietary
16 supplements.

17 16. I am being compensated by the Federal Trade Commission in this litigation at the
18 rate of \$300 per hour.

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21
22 **DATA AND EXHIBITS CONSIDERED**

23 **Materials Received and Review Requested**

24 17. In connection with my role as supporting an application by the FTC, I was
25 furnished a product description document for the Emergency D-Virus Plan of Care by the FTC
26 for review. This document contains information relating to the ingredients and dosages of the
27

1 Emergency D-Virus Plan of Care that is the subject of the FTC's enforcement action, as well as
2 alleged patient claims. A true, correct, and complete copy of this product description document is
3 attached hereto as **Attachment B**. (App. 640-51).

4 18. Also in connection with my role as supporting an application by the FTC, I was
5 provided with correspondence dated April 9, 2020, from Golden Sunrise Nutraceutical, Inc., to
6 the Food and Drug Administration (FDA) that includes COVID-19 health claims and a copy of
7 the Emergency D-Virus Plan of Care that is substantially similar to the one furnished to me by
8 the FTC and attached as Attachment A. A true, correct, and complete copy of this April 9
9 correspondence is attached hereto as **Attachment C**. (App. 652-63).

10 19. Also in connection with my role as supporting an application by the FTC, I was
11 provided with correspondence dated April 25, 2020, from Golden Sunrise Nutraceutical, Inc., to
12 the FDA containing alleged Emergency D-Virus Plan patient results. A true, correct, and
13 complete copy of this April 25 correspondence is attached hereto as **Attachment D**. (App. 664-
14 81).

15 20. Also in connection with my role as supporting an application by the FTC, I was
16 further provided five (5) separate medical reports from Golden Sunrise Nutraceutical, Inc.,
17 allegedly indicating Emergency D-Virus Plan patient results to five (5) separate individuals,
18 whose names and personally identifiable information were redacted prior to my review. True,
19 correct, and complete copies of these redacted medical reports are attached hereto as
20 **Attachments E to I**. (App. 682-865).

21 21. I have undertaken a review to determine whether there is reliable scientific
22 support to claim that the Emergency D-Virus treatment plan effectively treats, mitigates the
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1 symptoms of, or cures COVID-19. The Emergency D-Virus treatment plan consists of four
2 products: ImunStem, Aktiffvate, AnterFeeron-1, and AnterFeeron-2.

3 22. According to Section 2.1 of the instructions contained in Attachment B,
4 consumers are first instructed to take one to four doses each of ImunStem and Aktiffvate per day,
5 with each dose constituting $\frac{1}{2}$ – $\frac{3}{4}$ dropperful, as frequently as every 1–3 hours. *See Att. B at 4*
6 *(App. 643).*

7
8 23. According to the ImunStem label’s Supplement Facts panel, available on page 11
9 of Attachment B (App. 650), one serving (0.5mL or 491.5mg) of ImunStem contains the
10 following ingredients and amounts:

- 11 a. Olive Leaf Extract – 260mg;
- 12 b. Yarrow Extract – 52mg; and
- 13 c. Rosemary Extract – 63mg.

14
15 “Other ingredients” listed on the label are organic compounds and solvents, Monoterpene, Cassia
16 Oil and Yucca.

17 24. According to the Aktiffvate label’s Supplement Facts panel, available on page 12
18 of Attachment B (App. 651), one serving (0.5mL or 491.5mg) of Aktiffvate contains the
19 following ingredients and amounts:

- 20 d. Turmeric Extract – 175mg;
- 21 e. Cayenne Extract – 40mg; and
- 22 f. Eucalyptus Extract – 20mg.

23
24 “Other ingredients” listed on the label are Wintergreen, solvents, organic compounds, Yucca,
25 and Olive Leaf.

1 25. According to Section 2.2 of the instructions contained in Attachment B,
2 consumers are instructed to take one fluid ounce of AnterFeeron-1, followed by one fluid ounce
3 of AnterFeeron-2 approximately 45 minutes to one hour after taking the ImunStem and
4 Aktiffvate. *See* Att. B at 4 (App. 643).

5
6 26. According to the AnterFeeron-1 label’s Supplement Facts panel, available on
7 page 9 of Attachment B (App. 648), one serving (1 fl. oz. or 491.5mg) of AnterFeeron-1 contains
8 the following ingredients and amounts:

- 9 a. Bilberry Leaf – 40mg;
10 b. Graviola – 120mg; and
11 c. Goldenseal – 80mg.

12
13 “Other Ingredients” listed on the label are solvents, organic compounds, Chuchuhuasi, Cayenne,
14 Maca, and Turmeric.

15 27. According to the AnterFeeron-2 label’s Supplement Facts panel, available on
16 page 10 of Attachment B (App. 649), one serving (1 fl. oz. or 491.5mg) of AnterFeeron-2
17 contains the following ingredients and amounts:

- 18 g. Astragalus – 20mg;
19 h. Reishi – 95mg; and
20 i. Mistletoe – 45mg.

21
22 “Other Ingredients” listed on the label are Cat’s Claw, organic compounds, Echinacea, and
23 Cordyceps.

24 28. I undertook a literature search to determine whether there is any publicly
25 available, reliable scientific evidence for the following claims:
26
27
28

- 1 j. Emergency D-Virus Plan of Care treats, mitigates the symptoms of, or cures
2 COVID-19; and
3 k. Emergency D-Virus Plan of Care is clinically or scientifically proven to treat
4 COVID-19.
5

6 **Analysis of Materials Received and Available Scientific Evidence**

7 29. I have searched for applicable published studies using PubMed, a database of
8 more than 30 million citations for biomedical literature from MEDLINE, life science journals,
9 and online books, maintained by the U.S. National Library of Medicine.

10 30. In my opinion, it is generally accepted in the field by medical experts that
11 adequate scientific evidence proving the efficacy of intervention agents, such as the ingredients
12 listed in Paragraphs 23-27 above, for treating, mitigating the symptoms, or curing COVID-19
13 should, at a minimum, consist of studies that meet or exceed the following standards:
14

- 15 a. The study must be randomized, double-blinded, and placebo-controlled. In other
16 words, study participants must be randomly assigned to the intervention or
17 placebo group, the assignment of which is unknown to both the researchers and
18 the participants, to assess the effect of the intervention without observational or
19 clinical biases that might skew the results;
20
21 b. The study participants must be human. Research studies using an *in vitro* or
22 animal model can be suggestive of mechanisms or effects that may or may not be
23 present in humans, but they do not, by themselves, provide adequate scientific
24 evidence for claims regarding the efficacy of such interventions when used by
25 humans because of the differences in physiological systems;
26
27 c. The study must use the product and dosage claimed to have the therapeutic effect;
28

- 1 d. The endpoint of the study must be the measured effect on COVID-19 in humans;
2 e. The study should be sufficiently powered to extrapolate the results to the general
3 population; and
4 f. The study should use a method of statistical analysis generally accepted by
5 experts in the field.
6

7 31. I have searched the available scientific evidence for applicable studies on
8 COVID-19, its treatment, and the ingredients listed in Paragraphs 23-27. My search of the
9 available scientific evidence failed to identify any clinical trials that would satisfy the minimum
10 requirements set forth in Paragraph 30 above and thereby support the proposition that any of the
11 ingredients of the Emergency D-Virus treatment plan listed in Paragraphs 23-27, alone or in
12 combination, treat, mitigate the symptoms of, or cure COVID-19 in humans.
13

14 32. I reviewed one computational model (*in silico*) study conducted to determine
15 whether any of 237 compounds had docking potential with a main protease enzyme. The
16 conclusion of the study was that some compounds from *Curcuma longa* (turmeric) had binding
17 potential. As discussed above in Paragraph 30, such research does not provide scientific support
18 for claims regarding the efficacy of that ingredient in treating COVID-19 in humans.
19

20 33. I did not locate any published animal studies on the ingredients listed in
21 Paragraphs 23-27 and COVID-19.

22 34. I did not locate any published clinical studies on the ingredients listed in
23 Paragraphs 23-27 and COVID-19.

24 35. A review of the available scientific evidence revealed no published study proving
25 that the Emergency D-Virus treatment plan treats, mitigates the symptoms of, or cures COVID-
26 19 in humans.
27
28

36. I also reviewed the five individual patient reports described in Paragraph 20 above. As discussed above in Paragraph 30, such reports do not provide scientific support for claims regarding the efficacy of the Emergency D-Virus treatment plan. Among other reasons, the sample size is inadequate, neither the researcher nor the subjects were blinded, and there is no control group.

OPINION

37. With respect to the materials discussed in Paragraphs 17-27 above, and based on my review and analysis of the available scientific evidence discussed in Paragraph 29 above, it is my expert opinion that there is not adequate scientific evidence to support the claim that the Emergency D-Virus Plan of Care treats, mitigates the symptoms of, or cures COVID-19 in humans.

I declare under penalty of perjury that the foregoing statement is true and correct.

Executed on July 28, 2020.

Richard B. van Breemen
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EDUCATION

- 1980-1985 Ph.D. 1985, in Pharmacology
Johns Hopkins University School of Medicine
Baltimore, Maryland
- 1976-1980 B.A. 1980, in Chemistry, with honors, German minor
Oberlin College, Oberlin, Ohio

PROFESSIONAL EXPERIENCE

- 2018-present Professor of Pharmaceutical Sciences, College of Pharmacy, Oregon State University, Corvallis, OR
- 2018-2020 Director of the Linus Pauling Institute, Oregon State University, Corvallis, OR
- 2018-2020 Linus Pauling Endowed Chair, Oregon State University, Corvallis, OR
- 2014-2018 Matthias C. Lu Collegiate Professor of Pharmacy, University of Illinois at Chicago, Chicago, IL
- 2011-2018 Director, UIC/NIH Center for Botanical Dietary Supplements Research, University of Illinois at Chicago, Chicago, IL
- 2000-2018 Professor of Medicinal Chemistry and Pharmacognosy
College of Pharmacy, University of Illinois at Chicago, Chicago, IL
- 2014-2020 Visiting Professor, Tongji School of Pharmacy, Huazhong University of Science and Technology, Wuhan, China
- 2010-2018 Director, Mass Spectrometry, Metabolomics and Proteomics Facility, University of Illinois Cancer Center, Chicago, IL
- 2016-present Editorial Board, *Journal of AOAC International*
- 2010-present Editorial Board, *Assay and Drug Development Technologies*
- 2013-2018 Regional Editor, *Biomedical Chromatography*
- 2001-2016 Academic Liaison, Mass Spectrometry, Metabolomics and Proteomics Facility, Research Resources Center, University of Illinois at Chicago, Chicago, IL
- 2010-2012 Assistant Head for Curricular Affairs, Department of Medicinal Chemistry and Pharmacognosy, University of Illinois at Chicago, Chicago, IL
- 2006-2013 Editorial Board, *Biomedical Chromatography*

- 1997-2010 Editor-in-Chief, *Combinatorial Chemistry & High Throughput Screening*
- 1994-2000 Associate Professor of Medicinal Chemistry
College of Pharmacy, University of Illinois at Chicago, Chicago, IL
- 1986-1993 Assistant Professor of Chemistry, Member of the Biotechnology Faculty
Director of the Mass Spectrometry Laboratory for Biotechnology Research
North Carolina State University, Raleigh, NC.
- 1985-1986 Postdoctoral Fellow. Middle Atlantic Mass Spectrometry Laboratory, NSF
Regional Instrumentation Facility, Johns Hopkins University School of Medicine,
Baltimore, MD. (Laboratory of Catherine Fenselau and Robert Cotter)

Visiting Assistant Professor of Chemistry
North Carolina State University, Raleigh, NC.
- 1980-1985 Predoctoral research and NIH/NCI T32 trainee, Dept. of Pharmacology Johns
Hopkins University School of Medicine. Baltimore, MD. Dissertation:
"Electrophilic Reactions of 1-O-Acyl Glucuronides." (Advisor, Catherine
Fenselau)
- 1979-1980 Honors research, Department of Chemistry, Oberlin College
Oberlin, OH. Synthesis of spirocyclic lactones as analogs of insect pheromones
- 1979 Research assistant, Department of Pharmacology, Toxicology Center, Univ. of
Iowa, Iowa City, IA. Quantitation of metabolites of diphenylhydantoin in human
serum using GC/MS. (Laboratory of L.J. Fischer)

HONORS AND AWARDS

- NIH/NCI Predoctoral Fellowship, 1980-1984
- Phi Lambda Upsilon (Chemistry Honor Society)
- Award for Outstanding Paper at the Third North American Meeting of the International Society for the Study of Xenobiotics. San Diego, CA, October 21-25, 1990
- Named by the Editors of *Spectroscopy* as one of 19 "Bright Young Stars" in analytical spectroscopy. ("Perspectives on 10 Years in Spectroscopy," *Spectroscopy*, **10**, 52-61, 1995)
Invited speaker, 11th International Carotenoid Conference, Leiden, The Netherlands, 1996
- Invited speaker, International Convention on Pharmaceutical Sciences Commemorating the 50th Anniversary of the Pharmaceutical Society of Korea. Seoul, Korea, 2001
- Outstanding Paper Award, 88th American Oil Chemists Society Annual Meeting & Expo. Seattle, WA, May 11-14, 1997
- Linus Pauling Institute Seminar Series Speaker. Oregon State University, Corvallis, OR, February 16, 2006
- University Scholar Award. University of Illinois, 2003-2006
- AOAC Presidential Task Force on Dietary Supplements, 2009-2011
- AOAC International Harvey W. Wiley Award, 2008
- Journal of Chromatography B Top Referee 2008
- AOAC International Dietary Supplement Methods Expert Review Panel Chair of the Year 2010

- Invited speaker, Charles E. Dohme Memorial Symposium, Johns Hopkins University School of Medicine. November 20, 2013
- Researcher of the Year, University of Illinois at Chicago, 2015
- Fellow of the International Carotenoid Society, 2017
- Varro E. Tyler Prize, American Society of Pharmacognosy, 2017
- Shimadzu Scientific Instruments, Collaborator Award, 2018
- Landmark Literature 2019. *Analytical Scientist*, 2020; 34: 28-32. Chen L, van Breemen RB. *J. Biomed. Biopharm. Anal.* 9 (2020). doi: 10.1016/j.jpba.2019.112983 Named one of five landmark analytical chemistry papers of the year.

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1. Papers

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376. Newsome AG, Murphy BT, van Breemen RB. Isolation and characterization of natural blue pigments from underexplored sources. *Physical Methods in Food Analysis*. Ed. by Tunick MH and Onwulata CI. American Chemical Society Books, vol 1138, pp 105-125, 2013. DOI 10.1021/bk-2013-1138.ch008 *Featured on the book cover
377. van Breemen RB, Martinez E. Best practices in mass spectrometry for LC-MS. *Handbook of LC-MS Bioanalysis*. Ed. by Li W, Zhang J and Tse FLS. John Wiley & Sons, Hoboken, New Jersey, pp 205-216, 2013.
378. Nikolić D, Lankin DC, Cisowska T, Chen S-N, Pauli GF, van Breemen RB. Chapter 2. Nitrogen-containing constituents of black cohosh: Chemistry, structure elucidation, and biological activities. In *The Formation, Structure and Activity of Phytochemicals. Recent Advances in Phytochemistry 45*. Ed. By Jetter R. Springer International Publishing, Basel, Switzerland, pp 31-75, 2015. ISBN 978-3-319-20397-3
379. van Breemen RB, Wright B, Li Y, Nosal D, Burton T. Standardized grape powder for basic and clinical research. In *Grapes and Health*. Ed. By Pezzuto JM. Springer International Publishing, Basel, Switzerland, pp 17-26, 2016. ISBN 978-3-319-28993-9
380. van Breemen RB, Newsome AG, Dahl, JH, Muchiri RN. Mass spectrometry and drug discovery. In *Burger's Medicinal Chemistry, Drug Discovery and Development*. 8th Edition, Volume 1: Drug Discovery. Ed. by Abraham DJ. John Wiley & Sons, New York, 2020.

3. Patents

US Patent No. US 5872015. "Molecular Diversity Screening Method." Patent issued February 16, 1999. Patent application filed May 10, 1996. Inventors: Venton, D.L., Woodbury, C.P., and van Breemen, R.B.

US Patent No. US 6,995,022 B1. "Screening of Xenobiotics and Endogenous Compounds for Metabolic Transformation, Formation of Toxic Metabolites, and Bioavailability." Patent issued February 7, 2006. Patent application filed December 23, 1999. Inventors: van Breemen, R.B., and Bolton, J.L.

World Patent WO/2010/025209. "Jasmonic Acid Compounds in Cocoa Products." Patent application filed August 27, 2009. Inventors: Hurst, W.J., Stuart, D.A., Calderon Justavino, A.I., van Breemen, R.B.

4. Book Reviews

van Breemen, R. B., *Anal. Chem.*, **63**, 235A (1991). Review of Biomedical Applications of Mass Spectrometry, Volume 34, C. H. Suelter and J. T. Watson, Eds., John Wiley & Sons, New York, 1990.

van Breemen, R. B., *J. Am. Soc. Mass Spectrom.*, **3**, 867 (1992). Review of Continuous-Flow Fast Atom Bombardment Mass Spectrometry, R. M. Caprioli, Ed., John Wiley & Sons, New York, 1990.

van Breemen, R. B., *J. Med. Chem.*, **35**, 4919-4920 (1992). Review of Mass Spectrometry in the Biological Sciences: A Tutorial, M. L. Gross, Ed., Kluwer Academic Publishers, Dordrecht, 1992.

van Breemen, R. B., *Anal. Chem.*, **65**, 795A (1993). Review of Liquid Chromatography-Mass Spectrometry, W. Niessen and J. van der Graaf, Marcel Dekker, Inc., New York, 1992.

van Breemen, R. B., *J. Am. Chem. Soc.*, **121**, 8413-8414 (1999). Review of Integration of Pharmaceutical Discovery and Development: Case Histories. Volume 11. Pharmaceutical Biotechnology. Edited by R. T. Borchardt, R. M. Freidinger, T. K. Sawyer and P. L. Smith. Plenum Press, New York. 1998.

van Breemen, R. B. *J. Am. Chem. Soc.*, **123**, 8646-8647 (2001). Review of Combinatorial Chemistry. A Practical Approach, Willi Bannwarth and Eduard Felder, Eds. Wiley-VCH: Weinheim. 2000.

COURSES TAUGHT

CH527 Mass Spectrometry, created and taught new course Fall 1986, 1988, 1990, 1992

CH525 Physical Methods in Organic Chemistry, Spring 1987-1993

CH220 Introductory Organic Chemistry, Fall 1987

CH315 Quantitative Analysis, Spring 1988

CH221 Organic Chemistry I, Spring 1989, Fall 1993

CH223 Organic Chemistry II, Fall 1989, Fall 1991

BPS 385 Special Topics: Survey of Research in Pharmaceutical Sciences, Fall 2006

BPS 471 Clinical Pharmacology II, Spring 2005, Spring 2006 (lecturer)

PL508 Metabolism of Drugs and Foreign Compounds, Fall 1996-1997 (lecturer)

MDCH 561 Principles of Medicinal Chemistry, Fall 1996-1997 (lecturer), 1998 (coordinator), 1999-2006 (lecturer)

MDCH 562 Spectroscopy in Medicinal Chemistry, Fall 1994-1995 (coordinator), 1996-2000 (lecturer), 2001 (coordinator), 2002 (lecturer), 2004-2010 (coordinator), Spring 2011-2017 (coordinator)

MDCH 565 Laboratory Methods in Medicinal Chemistry, Summer 1995-2001 (lecturer)

MDCH 592 Research Topics in Medicinal Chemistry 2002-2008 (lecturer)

MDCH 594 LC-MS Techniques 2007 (coordinator)

MDCH 585 Practical Liquid Chromatography 2008-2010 (coordinator)

MDCH 595/PMPG 595 Seminars in Medicinal Chemistry/Pharmacognosy 1999, 2002, 2006, 2007(coordinator); 2001, 2003, 2005 (lecturer)

PHAR 333 Review of Spectroscopy, Fall 1998-1999 (lecturer), 2000 (co-coordinator), 2001-2016 (lecturer)

PHAR 403 Principles of Drug Action and Therapeutics VI: Medicinal Chemistry of Antiviral Agents, Spring 2008-2017 (lecturer)

PHAR 406 Principles of Drug Action and Therapeutics VI: Chemistry of Antivirals, Fall 1999-2007 (lecturer)

PHAR 423 Biomedical Chemistry, Spring 2017 (lecturer)

PMMP 323 Bioanalytical Chemistry, Fall 1994-1995, 1997 (lecturer), 1996 (coordinator)

PMMP 623 Bioanalytical Chemistry, Spring 1995-2000 (coordinator)

PMPC 495 Biotechnology I, Introduction to Pharmaceutical Biotechnology, Spring 1999 (lecturer)

PMPG 480 Methods of Evaluating Biologically Active Natural Product Drugs, Spring 1998-2006; Fall 2009 (lecturer)

PMPG 507 Drug Discovery, Design and Development, Fall 2005-2017 (lecturer)

PMPG 510 Research Techniques in Pharmacognosy, Fall 1997-2017 (lecturer)

PMPG 515 Structure Elucidation of Natural Products, Spring 1998, 2000 (lecturer)

PMPG 495 Introduction to Pharmaceutical Biotechnology, Spring 1999 (lecturer)

PMPG 511 Advanced Pharmacognosy II, Spring 2006-2016 (lecturer)

International Training Program in New Crops: Aromatic and Medicinal Plants – 1995 and 2000. Taught laboratory practicum on, “Medicinal plant analysis using HPLC and LC-MS.” University of Illinois at Chicago and Purdue University. Chicago, IL. June 19-30, 1995 and 2000.

RESEARCH STUDENTS AND POST-DOCTORAL FELLOWS SUPERVISED

Graduate Students

1. Jeffrey T. Keever, M.S. Chemistry, 1988. North Carolina State University Current position: MS application specialist, Agilent, Cary, NC
2. LeRoy B. Martin, III, Ph.D. Chemistry, 1990
"Mass Spectrometry of Organometallics and Several Platinated Oligonucleotides"
Current position: Mass spectrometry applications scientist with Micromass, Division of Waters, Danvers, MA
3. David R. Goodlett, Ph.D. Biochemistry, 1991
"Studies on the Active Site of Juvenile Hormone Esterase"
Current position: Professor of Medicinal Chemistry, University of Maryland, College of Pharmacy, Baltimore, MD
4. Chien-Hua Huang, Ph.D. Chemistry, 1991
"Synthesis of Poly-3,3,3-trifluoro-1-phenylpropyne and Poly-1-phenylpropyne and Characterization by Chromatography and Mass Spectrometry"
Current position: Chemist in Taiwan
5. Roderick G. Davis, M.S. Chemistry, 1991
"Rates of Proteolysis of Bioactive Peptides Determined Using HPLC and Mass Spectrometry"
Current position: Mass spectrometry specialist, Northwestern University, Evanston, IL
6. Catherine Ann Culver, Ph.D. Food Science, 1991
"Application of Immobilized Digestive Enzyme Assay Fluidized-bed Reactors and Characterization of Their Digests."
Current position: Principal scientist, Pepsi-Cola Co., Valhalla, NY
7. Yinhsien Tsou, Ph.D. Chemistry, 1993
"Degradation of Xenobiotic Compounds by Immobilized Enzymes and Cells"
Current position: Killed in automobile accident
8. Kevin Blackburn, M.S. Chemistry, 1993
"Degradation of Lysobactin by Digestive Proteases"
Current position: Analytical chemist, Glaxo SmithKline Pharmaceuticals, Research Triangle Park, NC
9. Dejan Nikolic, Ph.D. Medicinal Chemistry, 1999
"Screening of Combinatorial Chemistry Libraries Using Pulsed Ultrafiltration-Mass Spectrometry" Current position: Mass spectrometry lab manager and Research Assistant Professor, UIC/NIH Center for Botanical Dietary Supplements Research, University of Illinois College of Pharmacy, Chicago, IL
10. Lixin Shen, M.S. Medicinal Chemistry, 1999
"Analysis of DNA Oxidation Products using Liquid Chromatography-Mass Spectrometry"
Current position: Mass spectrometrists, Roche Pharmaceuticals, Nutley, NJ
11. Xiaoying Xu, Ph.D. Pharmacognosy, 2000
"Antiproliferative Effect of Lycopene on Prostate Cancer Cells"
Current position: Group Leader Analytical and PMPK, Novartis, Shanghai, China

12. Yan Wang, Ph.D. Medicinal Chemistry, 2001
 “Prevention of Prostate Cancer by Lycopene”
 Current position: Director of Proteomics, College of Chemical and Life Sciences, University of Maryland, College Park, MD
13. Chongwoo Yu, Ph.D. Chemistry, 2002
 “Investigation of Resveratrol Metabolism using Liquid Chromatography-Mass Spectrometry”
 Current position: Office of Clinical Pharmacology, U. S. Food and Drug Administration, Silver Spring, MD
14. Yanan Yang, Ph.D. Medicinal Chemistry, 2003
 “Quantitative Determination of DNA Oxidation and DNA Methylation by Using LC-UV-MS-MS” Current position: Mass spectrometrists, Agilent Technologies, Palo Alto, CA
15. Benjamin M. Johnson, Ph.D. Medicinal Chemistry, 2003
 “Mass Spectrometric Assays for Electrophilic Metabolites of Natural Product Mixtures”
 Current position: Senior scientist, Bristol Myers Squibb, Wallingford, CT
16. Spiros Garbis, Ph.D. Pharmacognosy, 2003
 “Bioavailability Studies of Folate in Humans”
 Current position: Director, Proteome Exploration Laboratory, Beckman Institute, California Institute of Technology, Pasadena, CA
17. Yongmei Li, Ph.D. Pharmacognosy, 2004
 “Caco-2 cell permeation studies and metabolism of botanical natural products”
 Current position: Senior Scientist in Drug Metabolism and Pharmacokinetics. Boehringer Ingelheim, Ridgefield, CT
18. Natasa Pajkovic, Ph.D. Medicinal Chemistry, 2005
 “Prevention of Prostate Cancer by Lycopene”
 Current position: Senior Scientist in Drug Metabolism. Merck, West Point, PA
19. Wenzhong Liang, Ph.D. Pharmacognosy, 2005
 “Pharmacokinetics and metabolism studies of active compounds in botanical dietary supplements for women’s health”
 Current position: Senior Scientist at Pharmaceutical Product Development, Inc. Madison, WI
20. Xun Cheng, Ph.D. Medicinal Chemistry, 2005
 “Ultrafiltration Mass Spectrometric Screening for Inhibitors of Macromolecular Aggregation”
 Current position: R & D Senior Scientist at Alexza Pharmaceuticals, Mountain View, CA (previously Gilead Science, Foster City, CA)
21. Yongkai Sun, Ph.D. Medicinal Chemistry, 2005
 “Characterization of estrogens using ultrafiltration mass spectrometry”
 Current position: Senior Research Scientist at Celgene, Summit, NJ
22. Xiaofeng Yang, Ph.D. Medicinal Chemistry, 2005
 “Studies of protein covalent modifications using mass spectrometry”
 Current position: Scientist I at Millennium Pharmaceuticals, Cambridge, MA
23. Guowen Liu, Ph.D. Medicinal Chemistry, 2005
 “Screening for potential chemopreventive agents targeting human Keap1 and human RAR γ using mass spectrometry”
 Current position: Scientist at Bristol Myers Squibb, New Brunswick, NJ

24. Dongwei Zhu, Ph.D. Medicinal Chemistry, 2006
“ β -Carotene bioefficacy and prevention of lipid peroxidation by lycopene”
Current position: Medical Technologist, Tufts Medical Center, Boston, MA
25. Yan Pang, Ph.D. Medicinal Chemistry, 2006
“*In vitro* studies of intestinal absorption, blood brain barrier permeability and metabolism of natural products using mass spectrometry”
Current position: Senior Scientist in Preclinical Drug Metabolism at Abbott Laboratories, Abbott Park, IL
26. Aarti Sawant, Ph.D. Medicinal Chemistry, 2006
“*In vitro* and *in vivo* identification and evaluation of electrophilic precursors in natural products”
Current position: Senior Scientist at Pfizer, Groton, CT
27. Yi Tao, Ph.D. Medicinal Chemistry, 2007
“Characterization of cyclooxygenase-2 inhibitors from ginger dietary supplements and *in vitro* metabolism studies of gingerol-related compounds”
Current position: Director of DMPK, GlaxoSmithKline Research and Development, Shanghai, China
28. Yan Luo, Ph.D. Medicinal Chemistry, 2008
“Application of proteomics mass spectrometry to the Keap1/Nrf2 chemoprevention pathway”
Current position: Mass spectrometrists, at Dow Chemical, Shanghai, China
29. Long Yuan, Ph.D. Medicinal Chemistry, 2008
“Identification and quantitative analysis of DNA damage products using LC-MS-MS”
Current position: Senior Investigator at Bristol-Myers Squibb, New Brunswick, NJ.
30. Jian Guo, Ph.D. Medicinal Chemistry, 2008
“Metabolism of active compounds in botanical dietary supplements”
Current position: Senior Investigator at Astrazeneca, Wilmington, DE.
31. Dongting Liu, Ph.D. Medicinal Chemistry, 2008
“Screening natural products for cancer chemopreventive agents based on binding to RXR α and alkylation of Keap1”
Current position: Senior Scientist at Q2 Lab Solutions, Indianapolis, IN
32. Ang Liu, Ph.D. Medicinal Chemistry, 2008
“Mechanisms of prostate cancer prevention by lycopene”
Current position: Research Investigator II, Bristol-Myers Squibb, New Brunswick, NJ
33. Hongmei Cao, Ph.D. Medicinal Chemistry, 2009
“Role of cyclooxygenases in inflammation and chemoprevention”
Current position: Senior Scientist at Shire Pharmaceuticals, Lexington, MA
34. Jeffrey H. Dahl, Ph.D. Medicinal Chemistry, 2010
“Antioxidant effects and metabolism of lycopene”
Current position: Scientist at Shimadzu Instruments, Columbia, MD
35. Jinghu Carl Li, Ph.D. Medicinal Chemistry, 2010
“Studies of metabolism and disposition of natural products using mass spectrometry”
Current position: Senior Research Scientist at AMRI, Albany, NY
36. Chenqi Hu, Ph.D. Medicinal Chemistry, 2011
“Analysis of Nrf2-Keap1 chemoprevention signaling using mass spectrometry”

Current position: Scientist at Amgen, Cambridge, MA

37. Zhiyuan Sun, M.S. Medicinal Chemistry, 2011

“Mass Spectrometric studies of Keap1-Nrf2 binding interactions.”

Current position: Staff Scientist in University of Pittsburgh Proteomics Center, Pittsburgh, PA

38. Soyoun Ahn, Ph.D. Pharmacognosy, 2011

“In vitro studies of intestinal absorption and blood-brain barrier penetration of pharmacologically active compounds using cell monolayer models combined with HPLC-mass spectrometry”

Current position: Principal Scientist DMPK, CrystalGenomics, Seoul, Korea.

39. Yang Song, Ph.D. Pharmacognosy, 2011

“ADMEt Evaluation of Anti-tuberculosis Compounds and New Methodologies Development.”

Current position: Senior Scientist at Chemocentryx, San Francisco, CA

40. Jerry J. White, Ph.D. Medicinal Chemistry, 2012

“A high-throughput LC-MS platform for the discovery of vitamin D receptor ligands.”

Current position: JW LCMS Solutions, Pittsburgh, PA

41. Xi Qiu, Ph.D. Pharmacognosy, 2012

“Chemoprevention study of botanical dietary supplements by mass spectrometry.”

Current position: Senior Research Scientist, QPS Holdings, Philadelphia, PA

42. Yang Yuan, Ph.D. Medicinal Chemistry, 2012

“Quantitative analysis of estrogenic xenobiotics in humans using liquid chromatography-mass spectrometry.” Current position: Scientist at DuPont Crop Protection, Newark, DE

43. Rui Yu, Ph.D. Medicinal Chemistry, 2012

“Studies of cellular pathways and enzymatic modulations of prostanoids using mass spectrometry.” Current position: Goldberg fellow at University of North Carolina at Chapel Hill, Chapel Hill, NC

44. Lian Chen, Ph.D. Pharmacognosy, 2012

“High throughput discovery, metabolism and disposition of chemopreventive agents using mass spectrometry.” Current position: Principal Investigator at CMIC Holdings, Chicago, IL

45. Kevin Krock, Ph.D. Medicinal Chemistry, 2013

“Mass spectrometry-based discovery of β -amyloid aggregation inhibitors.” Current position: Director of Research and Development at Precision Toxicology, San Diego, CA

46. Linlin Dong, Ph.D. Pharmacognosy, 2013

“Analysis of carotenoids using LC-MS-MS with ion mobility spectrometry and photoionization.”

Current position: Scientist at Takeda Pharmaceuticals, Cambridge, MA

47. Caleb Nienow, Ph.D. Medicinal Chemistry, 2016

“Serum metabolome and proteome effects of phytoestrogenic dietary supplements in postmenopausal women.” Current position: Scientist at Shimadzu Scientific, Columbia, MD

48. Guannan Li, Ph.D. Medicinal Chemistry, 2016

“Safety of botanical dietary supplements – licorice: in vitro investigation of drug-botanical interactions.” Current position: Scientist at Agilent, Santa Clara, CA

49. Ke Huang, Ph.D. Medicinal Chemistry, 2016

“In vitro investigation of metabolism, bioactivation and botanical-drug interactions of licorice.” Current position: Scientist at Bristol-Myers Squibb, Syracuse, NY

50. Zane Z. Hauck, Ph.D. Pharmacognosy, 2017
 "Tissue distribution, pharmacokinetics and metabolism of brodifacoum, a superwarfarin."
 Current position: Quality Control Laboratory Manager, Highland Laboratories, Mt. Angel, OR
51. Yongchao Li, Ph.D. Medicinal Chemistry, 2017
 "A high throughput LC-MS platform for the discovery of autotaxin inhibitors"
52. Michael D. Rush, Ph.D. Medicinal Chemistry, 2017
 "Magnetic microbead affinity selection screening: development, application, and evaluation"
 Current position: Research and Technology Chemist, Albemarle Corp., Baton Rouge, LA
53. Tristesse C. Burton, Ph.D. Pharmacognosy, 2017
 "American Indian botanicals for women's health: ethnobotanical and pharmacognostic studies"
54. Andrew Newsome, Ph.D. Pharmacognosy, 2017
 "Isolation and characterization of natural blue pigments"
55. Lingyi Huang, Ph.D. Pharmacognosy, 2017
 "Metabolism and bioactivity studies of licorice species and active compounds"
 Current position: Scientist at MedImmune, South San Francisco, CA
56. Luying Chen, Ph.D. Pharmaceutical Sciences, 2020
 "Safety of phytoestrogenic botanical dietary supplements: in vivo and in vitro evaluation of botanical-drug interactions"
57. Daniel Nosal, Pharmaceutical Sciences Graduate Student, 2013-present
 "Phytoprogestins in botanical dietary supplements"
58. Emily Rue, Pharmaceutical Sciences Graduate Student, 2015-present
 "Identification of procyanidins using ion mobility tandem mass spectrometry"
59. Jialin Liu, Pharmaceutical Sciences Graduate Student, 2016-present
 "Intestinal permeability and bioavailability of natural products"
60. Alan Wong, Pharmaceutical Sciences Graduate Student, 2016-present
 "Clinical biomarkers of estradiol metabolism"

Undergraduates and High School Students

- Michael G. Bartlett, B.A. 1990. North Carolina State University, Raleigh, NC.
 Senior undergraduate research project in chemistry. "Degradation of Bioactive Peptides by Immobilized Proteases."
 Subsequent position: Ph.D. program, Dept. of Chemistry, Indiana University, Bloomington, IN.
 Current position: Professor of Medicinal Chemistry, College of Pharmacy, University of Georgia, Athens, GA.
- Jack Thornquest, B.A. 1992. North Carolina State University, Raleigh, NC. Senior undergraduate research project in chemistry. "Interaction of Phage mRNA with a Regulatory Protein." Subsequent position: Ph.D. program, Dept of Chemistry, Univ. of North Carolina at Chapel Hill.
- Jacob Lai, B.S. 2000. Northwestern University, Evanston, IL. Summer research 1996-1999. Subsequent position, Ph.D. program, Dept. of Chemistry, Stanford University, Palo Alto, CA. Current position, Senior Chemist, Alza (Johnson & Johnson), Mountain View, CA.

Jacob Lai and Donald Park. 1994-1995. Illinois Mathematics and Science Academy, Aurora, IL. High school science project supervisor/mentor. "C₁₈ reversed phase high-performance liquid chromatography and mass spectrometry of oligonucleotides."

Priscilla A. Bernikowicz. 1995-1996. Lincoln Park High School, Chicago, IL. High school science project supervisor/mentor. "Nicotine analysis and ETS exposure." Named Semifinalist in the national Westinghouse 55th Annual Science Talent Search. Attended Northwestern University.

Helen Feinstein, Jennifer Mack and Donald Park. 1995-1996. Illinois Mathematics and Science Academy, Aurora, IL. High school science project supervisor/mentor. "Affinity LC-MS of antisense oligonucleotides."

Bradley Jellerichs and Angela Janis. 1996-1997. Illinois Mathematics and Science Academy, Aurora, IL. High school science project supervisor/mentor. "Synthesis of oxidized deoxynucleosides."

Adam Rojan. 1997-1998. Illinois Mathematics and Science Academy, Aurora, IL. High school science project supervisor/mentor. "Pulsed ultrafiltration affinity constant measurements."

Marissa Fierz. 1998-1999. Illinois Mathematics and Science Academy, Aurora, IL. High school science project supervisor/mentor. "Degradation products of lycopene and their linkage to prostate cancer."

Eric Bunnelle and Stephen Trevick, 2000-2001. Illinois Mathematics and Science Academy, Aurora, IL. High school science project supervisor/mentor. "Pulsed ultrafiltration measurement of receptor-ligand interactions." Eric Bunnelle attended the University of Illinois at Champaign-Urbana as a chemical engineering major.

Kevin Yang and Sri P. Vagvala, 2001-2002. Illinois Mathematics and Science Academy, Aurora, IL. High school science project supervisor/mentor. "Chamber miniaturization to shorten assay time and minimize ligand and receptor consumption during pulsed ultrafiltration."

Alex Viana, B.S. 2007. University of Wisconsin, Madison, WI. Summer research 2001-2003. "Evaluation of the safety and efficacy of botanical dietary supplements as alternatives to hormone replacement therapy." Current position: M.S. program in astronomy, the Johns Hopkins University, Baltimore, MD.

Brent Terry-Penak, 2009. St. Ignatius College Prep, Chicago, IL. High school summer research internship. "Ion mobility mass spectrometry of lycopene."

Summer 2010 and 2011. California Institute of Technology, Pasadena, CA. "Ion mobility mass spectrometry of lycopene."

Brian Lopez, 2015-2017. University of Illinois at Chicago, Biochemistry. Chicago, IL. Undergraduate research, "Drug interactions with botanical dietary supplements."

Postdoctoral Fellows

1. Chien-Hua Huang, Post-doctoral fellow 1991-1993
"Liquid Chromatography-Mass Spectrometry of Serum Carotenoids"
Current position: Chemist in Taiwan

2. Chao-Ran Huang, Post-doctoral fellow 1994-1996
"Liquid Chromatography-Mass Spectrometry of Carotenoids"
Current position: Senior scientist at Biogen Idec, Cambridge, MA

3. Henry Xiong, Postdoctoral Fellow, 1997-1998
 “Prevention of DNA Oxidation by Carotenoids”
 Current position: Mass spectrometry applications specialist at Micromass, Waters, Danvers, MA
4. Yong Chen, Postdoctoral Fellow, 1998
 “Role of retinol, retinol binding protein and fatty acids in vision”
 Current position: VP for Analytical Development and Quality Control, WilmingtonPharmaTech, Wilmington, DE
5. Samuel B. Wainhaus, Postdoctoral Fellow, 1998-1999
 “LC-MS-MS Quantitation of DNA Oxidation Products”
 Current position: Senior scientist, Schering-Plough Pharmaceuticals, Kenilworth, NJ
6. Dejan Nikolic, Post-doctoral fellow, 1999-2001
 Current Position: Research assistant professor, mass spectrometry laboratory manager, UIC/NIH Center for Botanical Dietary Supplements Research, University of Illinois at Chicago
7. Yousheng Hua, Postdoctoral Fellow, 1999-2000
 “LC-MS-MS Quantitation of DNA Oxidation Products”
 Current position: Senior Scientist at Baxter, Technology Resources/Physics & Chemistry Department. Round Lake, IL.
8. Young-Guen Shin, Postdoctoral Fellow, 1999-2001
 “Natural Inhibitors of Carcinogenesis, LC-MS-MS Applications”
 Current position: Associate Professor, College of Pharmacy, Chungnam National University
9. Chuck Gu, Postdoctoral Fellow, 1999-2001
 “NCI LC-MS-MS Core for Cancer Research”
 Current position: Senior Scientist at Biogen, Cambridge, MA
10. Liqiong Fang, Postdoctoral Fellow, 1999-2002
 “Prevention of Prostate Cancer by Lycopene”
 Current Position: Senior Scientist at Baxter Healthcare, Round Lake, IL
11. Wenkui Li, Postdoctoral Fellow, 2001-2003
 “Standardization of Botanical Dietary Supplements”
 Current Position: Senior Scientist at Novartis, East Hanover, NJ
12. Huaping Wu, Postdoctoral Fellow, 2001-2004
 “Mass Spectrometry-based Proteomics”
 Current position: Research scientist, Illinois Institute of Technology, Chicago IL
13. Sool Yeon Cho, Postdoctoral Fellow, 2002-2004
 “Lycopene Degradation Products and Cancer Chemoprevention”
 Current position: ARD Scientist at Teva Pharmaceuticals, New York, NY
14. Zorica Vujic, Postdoctoral Fellow, 2003-2004
 “Mechanism of Prostate Cancer Prevention by Lycopene”
 Current Position: Lecturer in Medicinal Chemistry, School of Pharmacy, Belgrade University, Belgrade, Serbia
15. Christopher Pennington, Postdoctoral Fellow, 2006-2007
 “Mass spectrometry-based discovery of natural product chemoprevention agents”
 Current Position: Senior Scientist, Abbott Laboratories, North Chicago, IL
16. Angela Calderon, Postdoctoral Fellow, 2006-2008

“Mass spectrometry-based assays of antioxidants in chocolate”

Current Position: Associate Professor of Medicinal Chemistry, Harrison School of Pharmacy, Auburn University, Auburn, AL

17. Yongsoo Choi, Postdoctoral Fellow, 2006-2010

“Mass spectrometry-based screening for estrogenic natural products”

Current Position: Scientist at the Korea Institute of Science and Technology (KIST)

18. Sigrid Baumgarten, Postdoctoral Fellow, 2009-2011

“Mass spectrometry-based chemoprevention agent discovery and development”

Current Position: Marketing specialist, ThermoFisher, Paris, France

19. Shunyan Mo, Postdoctoral Fellow, 2009-2012

“Cyclooxygenase inhibitors in cocoa”

Current Position: Analytical Development Scientist, Vertex Pharmaceuticals, Boston, MA

20. Jinbo Fang, Postdoctoral Fellow, 2012-2013

“Metabolism of prenylated flavanoids in *Humulus lupulus*”

Current Position: Assistant Professor of Pharmacy, Huazhong University of Science and Technology, Wuhan, China

21. Elisabeth Hersman Walker, Postdoctoral Fellow, 2013-2015

“Ultrafast pulsed ultrafiltration – mass spectrometry”

Current Position: Mass Spectrometry Applications Specialist, Thermo Scientific, Boston, MA

22. Alyssa Sprouse, Postdoctoral Fellow, 2014-2016

“Drug-botanical interactions” Current Position: Senior Scientist, UIC/NIH Center for Botanical Dietary Supplements Research, Chicago, IL

23. Ruth Muchiri, Postdoctoral Fellow, 2015-2017

“Magnetic microbead affinity separation screening (MagMASS)”

Current Position: Lab Manager, Linus Pauling Institute, Corvallis, OR

24. Amanda Lee, Postdoctoral Fellow, 2016-2017

“Changes in serum proteome following consumption of estrogenic botanical dietary supplements by menopausal women” Current Position: Scientist, Thermo Corporation, Chicago, IL

Visiting Scholars

Jovana Marinkovic, 1996

University of Belgrade, College of Pharmacy

Florentina Catana, 1998

State Institute for Drug Control and Pharmaceutical Research, Bucharest, Romania

Mine Bilsel, 2000

Tübitak Marmara Materials and Chemical Technologies Research Institute, Tübitak, Turkey

Genying Xu, 2001

Shongshan Hospital, Fudan University. Shanghai, Peoples Republic of China

Sara Madelene Johansson, 2002

Swedish University of Agricultural Sciences, Uppsala, Sweden.

Zeying Wei, 2004

Associate Professor, Department of Traditional Pharmaceutics, Yunnan University of Traditional Chinese Medicine, P.R. China.

Selin Bolca, 2009

Laboratory of Phytochemistry and Pharmacognosy, Ghent University
Gent, Belgium.

Marion Petitet, 2011

Ecole de Biologie Industrielle
Cergy, France

Jianming Ju, 2016

Jiangsu Province Academy of Traditional Chinese Medicine
Nanjing, P.R. China

Masters of Science Thesis Committee Memberships

Longwen Chen, 1997. Human Nutrition and Dietetics, University of Illinois College of Allied Health Sciences.

Vinitha Senaratne, 1988. Analytical Chemistry, North Carolina State University

The electrode reaction of *Euglena gracilis* cytochrome c-552 at edge-oriented pyrolytic graphite

LaShaunda King, 1998. Medicinal Chemistry, University of Illinois College of Pharmacy.

Yumei Chen, 1999. Pharmacognosy, University of Illinois College of Pharmacy

DNA damage and induction of apoptosis by the equine estrogen metabolite 4-hydroxyequilenin.

Dan Yao, 2001. Medicinal Chemistry, University of Illinois College of Pharmacy

Synthesis and reactivity of potential toxic metabolites of tamoxifen analogues: droloxifene and toremifene *o*-quinones.

Tracy Katz, 2002. Nutrition, University of Illinois College of Allied Health Sciences

Nutrient consumption of men with prostate cancer vs. men with high PSA but biopsy negative.

Linning Yu, 2003. Medicinal Chemistry, University of Illinois College of Pharmacy

Qi Shen, 2007. Pharmacognosy, University of Illinois College of Pharmacy

Growth hormone is required for rodent mammary carcinogenesis

Hua Wei, 2007. Public Health Sciences, University of Illinois School of Public Health

Analytical method enhancement of PBDEs in the environmental samples from lake sediment, indoor dust and sludge.

Stephanie M. Schlecht, 2007. Pharmacognosy, University of Illinois College of Pharmacy

Preliminary biochemical studies on *Vitex agnus-castus* L.

Emily A. Rue, 2018. Forensic Science, University of Illinois College of Pharmacy

Characterization of fentanyl analogues by instrumental analysis.

Dissertation Committee Memberships

Brian T. Buckley, 1989. Analytical Chemistry, North Carolina State University

Sample introduction into a direct current plasma by filament vaporization

Audrey L. Goodell, 1990. Biochemistry, North Carolina State University

Investigation of the possible role of sulfhydryl oxidase activity in the assembly of immunoglobulin M

Kuen-Wang Sheu, 1992. Organic Chemistry, North Carolina State University
Addition reactions to 1,1-difluoro-2,2-diphenylthioethylene

Curtis W. Emenhiser, 1993. Food Science, North Carolina State University
High-performance liquid chromatography determination of cis-trans isomers of lycopene and the influence of thermal processing on lycopene isomerization

Shen Chen, 1995. Medicinal Chemistry, University of Illinois College of Pharmacy
Further development of pulsed ultrafiltration analysis of ligand-macromolecule interactions

Samuel B. Wainhaus, 1997. Chemistry, University of Illinois at Chicago, College of Liberal Arts and Sciences. Experimental studies of polyatomic ion interactions with clean and adsorbate covered metal surfaces

Li Shen, 1998. Medicinal Chemistry, University of Illinois College of Pharmacy
Potential carcinogenic mechanisms for premarin estrogens

Mei-Shiang Jang, 1998. Pharmacognosy, University of Illinois College of Pharmacy
Characterization of cyclooxygenase inhibitors as cancer chemopreventive agents

Hanjo Lim, 1999. Chemistry, University of Illinois at Chicago College of Liberal Arts and Sciences. Energetics studies of organic and biomolecular ions by surface-induced dissociation

Liqiong Fang, 1999. Pharmacognosy, University of Illinois College of Pharmacy
Cytotoxic constituents of *Dichapetalum gelonioides* and *Brachistus stramonifolius*

Peter Wei-Jen Fan, 2000. Medicinal Chemistry, University of Illinois College of Pharmacy
Synthesis, reactivity and bioactivation screening of potential carcinogenic metabolites of triphenylethylene antiestrogens

Hans E. Westenburg, 2000. Pharmacognosy, University of Illinois College of Pharmacy
Potential cancer chemopreventive agents from *Cotinus coggygia* and *Petiveria alliacea*

Minsun Chang, 2000. Medicinal Chemistry, University of Illinois College of Pharmacy.
Structural and functional consequences of catechol estrogen mediated inactivation of glutathione S-transferases

Fagen Zhang, 2000. Medicinal Chemistry, University of Illinois College of Pharmacy
Synthesis and reactivity of potential carcinogenic catechol metabolites from equine estrogens and tamoxifen

Liming Zhang, 2000. Medicinal Chemistry, University of Illinois College of Pharmacy.
In vitro study on stereoselectivity of mono-*N*-dealkylation of disopyramide associated with cytochrome P450 isozymes

Amit S. Kulkarni, 2000. Medicinal Chemistry, University of Illinois College of Pharmacy
Membrane interaction QSAR analysis: Methods and applications

LaShaunda T. King, 2001. Medicinal Chemistry, University of Illinois College of Pharmacy
Functional properties of bacterial and murine Hsp70s

Longwen Chen, 2001. Human Nutrition and Dietetics, University of Illinois College of Allied Health Sciences. Tomato sauce supplementation reduces DNA damage in men with prostate cancer

Yi Han, 2002. Medicinal Chemistry, University of Illinois College of Pharmacy

Quantitative methods to predict bio-potency and bioavailability

- Lixin Shen, 2002. Medicinal Chemistry, University of Illinois College of Pharmacy
Stereoselective metabolism of verapamil and four other chiral drugs by cDNA expressed CYP450s
- Xuemei Liu, 2003. Medicinal Chemistry, University of Illinois College of Pharmacy
Genotoxic effects induced by equine estrogen metabolites in breast cancer cells
- Wendy H. Hirschelman, 2003. Chemistry, University of Illinois at Chicago
Syntheses and cancer chemopreventive activity of oxomate, zapotin, resveratrol and analogs
- Lucas R. Chadwick, 2004. Pharmacognosy, University of Illinois College of Pharmacy
Estrogens and congeners from spent hops
- Chien Ma, 2004. Biopharmaceutical Sciences, University of Illinois College of Pharmacy
Nadolol: Mechanism of oral absorption and its implications in drug interactions
- Hyunyoung Jeong, 2004. Biopharmaceutical Sciences, University of Illinois College of Pharmacy.
Role of P-glycoprotein in oral bioavailability of its substrates: Tacrolimus as a model compound
- Yan Li, 2004. Medicinal Chemistry, University of Illinois College of Pharmacy
COMT mediated methylation metabolism of equine estrogen metabolite: 4-hydroxyequilenin
- Xiaoyan Zhao, 2004. Chemistry, University of Illinois College of Liberal Arts and Sciences
Methods of determination of dilute peptide and protein content in small volume biological samples
- Nancy L. Booth, 2005. Pharmacognosy, University of Illinois College of Pharmacy
Red clover (*Trifolium pratense*) as a botanical dietary supplement.
- Shixin Deng, 2005. Pharmacognosy, University of Illinois College of Pharmacy
Phytochemical investigation of bioactive constituents from *Angelical sinensi*.
- Hsuan-Ming Yao, 2005. Biopharmaceutical Sciences, University of Illinois College of Pharmacy
Evaluation of gastrointestinal absorption of digoxin
- Ju Liu, 2005. Medicinal Chemistry, University of Illinois College of Pharmacy
Bioactivation of SERMs to reactive metabolites and protein covalent modification by quinoids
- Li Zhu, 2006. Biopharmaceutical Sciences, University of Illinois College of Pharmacy
Intestinal barriers to oral bioavailability: Saquinavir as a model compound.
- Jill D. Dombrauckas, 2006. Medicinal Chemistry, University of Illinois College of Pharmacy
Structure determination and kinetic characterization of the tumor-specific pyruvate kinase M2
- Daniel S. Fabricant, 2006. Pharmacognosy, University of Illinois College of Pharmacy
Pharmacognostic investigation of black cohosh (*Cimicifuga racemosa* (L.) Nutt.)
- Hong Liu, 2006. Medicinal Chemistry, University of Illinois College of Pharmacy
Bioactivation of SERMS desmethylated arzoxifene and raloxifene to quinoids.
- Allison Turner, 2006. Pharmacognosy, University of Illinois College of Pharmacy
The pharmacognosy of cranberries (*Vaccinium macrocarpon* Aiton) as a urologic dietary supplement.
- Xiao Zhang, 2007. Pharmacognosy, University of Illinois College of Pharmacy
Novel therapeutic approaches for mammary cancer.

- Barbara Calamini, 2007. Medicinal Chemistry, University of Illinois College of Pharmacy
Towards the molecular bases for the health benefits of resveratrol and its metabolites.
- Cassia Rose Overk, 2007. Pharmacognosy, University of Illinois College of Pharmacy
Estrogenic evaluation of botanicals as possible alternatives to hormone replacement therapy.
- Huu Thi Nguyen, 2008. Pharmacognosy, University of Illinois College of Pharmacy
Palatable prophylaxis based on traditional Vietnamese health beliefs: an appealing approach to medicine.
- Jialin Mao, 2008. Medicinal Chemistry, University of Illinois College of Pharmacy
From serendipity to rational antituberculosis drug discovery on mefloquine-based ligands.
- Zhican Wang, 2009. Medicinal Chemistry, University of Illinois College of Pharmacy
Activation and genotoxic consequences of the Premarin equine estrogen metabolites to reactive quinones.
- Chuan Bai, 2010. Medicinal Chemistry, University of Illinois College of Pharmacy
Bacterial calcium-dependent phosphatidylinositol-specific phospholipase C: Mechanism and applications.
- Megan Sturdy, 2010. Medicinal Chemistry, University of Illinois College of Pharmacy
Natural product drug discovery regarding *Mycobacterium tuberculosis* and quinine reductase-2.
- Ayano Imai, 2011, Pharmacognosy, University of Illinois College of Pharmacy
Pharmacognosy of raw materials for black cohosh dietary supplements.
- Boobalan Pachaiyappan, 2011. Medicinal Chemistry, University of Illinois College of Pharmacy
Structure- and ligand-based modeling of β -secretase 1 (BACE1) inhibitors.
- Jay Kalin, 2012. Medicinal Chemistry, University of Illinois College of Pharmacy
Elucidation of the histone deacetylase 6 pharmacophore.
- Su-Young Choi, 2012. Pharmacognosy, University of Illinois College of Pharmacy
Female hormone-mediated hepatic CYP regulation: Implications in altered drug metabolism during pregnancy.
- Kelvin He Bai, 2012. Medicinal Chemistry, University of Illinois College of Pharmacy
Exploration of histone deacetylase ligand binding modes by photoaffinity probes.
- Aditya Vaidya, 2013, Medicinal Chemistry, University of Illinois College of Pharmacy
Design, synthesis, photoaffinity labeling studies, and biological evaluation of novel photoreactive probes for histone deacetylase 2 and 8.
- Nan Zhang, 2014, Medicinal Chemistry, University of Illinois College of Pharmacy
Drug metabolism in early stage anti-TB drug discovery, drug development and clinical practice.

PROFESSIONAL ACTIVITIES

- Co-chairman of the Triangle Area Mass Spectrometry Discussion Group, Research Triangle Park, NC. 1988-1990
- Chairman of the Desorption Ionization Interest Group for the American Society for Mass Spectrometry. 1992-1993
- Member of the Biotechnology Faculty at North Carolina State University. 1986-1993

Member of the Functional Foods for Health Research Program of the University of Illinois. 1994-2004

Member of the Program for Collaborative Research in the Pharmaceutical Sciences, University of Illinois at Chicago. 1995-present

Member of the Board for the Madison-Chicago-Milwaukee (MCM) Mass Spectrometry Discussion Group. 1997-2003

Member of the University of Illinois at Chicago General Clinical Research Center. 1997-2009

American Chemical Society/Scholarly Publishing and Academic Resources Coalition focus group on Internet role in scientific research. July 14, 1999

Member of the University of Illinois at Chicago Cancer Center. 2001-present

Member of the University of Illinois Center for Clinical and Translational Science. 2009-present

American Society for Mass Spectrometry Annual Conference Program Committee. 1997, 1998, 2011

Core Advisory Group of the AOAC Official Methods Program for Dietary Supplements. 2003-present

Madison-Chicago-Milwaukee Mass Spectrometry Discussion Group. Member-at-Large 2000-2003

Chicago Mass Spectrometry Discussion Group, Vice President 2004-2009

AOAC International Dietary Supplements Task Group. Member of Vitamin B₆ Expert Review Panel 2009-2010

AOAC International Dietary Supplements Task Group. Chair of Vitamin B₁₂ Expert Review Panel 2009-2010

AOAC Presidential Task Force on Dietary Supplements. 2007-2011

AOAC International Harvey W. Wiley Award Committee. 2010-2015

AOAC International Stakeholder Panel on Dietary Supplements. Chair of Vitamin B₁₂ Working Group on Standard Method Performance Requirements. 2016-2017

AOAC International Stakeholder Panel on Dietary Supplements. Chair of Resveratrol Working Group on Standard Method Performance Requirements. 2017-2018

Botanical Safety Consortium (U.S. Food and Drug Administration/NIH-National Institute of Environmental Health Sciences/Health and Environmental Sciences Institute). 2020-present

Editorial Board Membership

Editor-in-Chief, *Combinatorial Chemistry & High Throughput Screening*, published by Bentham Science Publishers. 1997-2010.

Editor-in-Chief emeritus, *Combinatorial Chemistry & High Throughput Screening*, published by Bentham Science Publishers. 2010-present.

Editorial Board, *Assay and Drug Development Technologies*, published by Mary Ann Liebert, Inc. Publishers. 2010-present.

Editorial Board, *Journal of AOAC International*, published by Oxford University Press. 2016-present.

Editorial Board, *BenSci Science Newsletter*, published by Bentham Science Publishers. 2009-2015.

Editorial Board, *Biomedical Chromatography*, published by Wiley Interscience. 2006-2013.

Regional Editor, *Biomedical Chromatography*, published by Wiley Interscience. 2013-2018.

Membership in Professional Societies and Organizations

American Chemical Society

AOAC International

American Society for Mass Spectrometry

American Society of Pharmacognosy

American Society for Pharmacology and Experimental Therapeutics

International Carotenoid Society

International Society for the Study of Xenobiotics

Sigma Xi

Federal Government Public Advisory Committee Service

NIH/National Cancer Institute, Initial Review Group, ZCA1 SRB-P (O1) NCI Clinical and Translational Exploratory/Developmental Studies (R21) & Omnibus R03. June 26, 2020.

NIH/National Center for Complementary and Integrative Health, Initial Review Group, ZAT1 JM(07) NCCIH Training and Education Review Panel. March 26-27, 2020.

NIH/National Center for Complementary and Integrative Health, Initial Review Group, ZAT1 JM(04) NCCIH Training and Education Review Panel. July 12, 2019.

NIH/National Center for Complementary and Integrative Health, Initial Review Group, ZAT1 VS 08 S, Natural Product R61/R33 Phase I-IIa Clinical Trial Awards. Review panel chair. March 22, 2018.

NIH/National Cancer Institute, Initial Review Group, ZCA1 SRB-P (J1). Clinical and Translational R21 & Omnibus R03: SEP-3 September 25-26, 2017; September 14, 2018; SEP-5 February 1, 2019.

NIH/National Center for Complementary and Integrative Health, Initial Review Group, ZAT1 YW (01). Review of R61/R33 Clinical Grant Applications. Review panel chair. March 30, 2017.

NIH/National Institute of General Medical Sciences, Initial Review Group, ZGM1 TWD-A (KR). Review of COBRE I Grant Applications. Bethesda, MD. July 14, 2016.

NIH/National Institute of General Medical Sciences, Initial Review Group, ZGM1 TWD-A (KR). Review of K99/R00 Research Grant Applications. Bethesda, MD. March 15, 2016.

NIH/National Institute of General Medical Sciences, Initial Review Group, ZGM1 TWD-A (KR). Review of K99/R00 Research Grant Applications. Bethesda, MD. March 15, 2015.

NIH/National Center for Complementary and Integrative Health, “Clinical Research on Natural Products (R21 and R33)” RFA-AT-16-001 and RFA-AT-16-002, review panel chair. November 4, 2015.

NIH/National Institute of General Medical Sciences, Initial Review Group, ZGM1 TWD-A (KR). Review of K99/R00 Research Grant Applications. Bethesda, MD. July 14, 2015.

NIH/National Cancer Institute, Site Visit Review Committee, University of Pittsburgh Cancer Institute, NCI-A RTRB-I (E2) 2 P30 CA047904-27. Pittsburgh, PA. January 28-30, 2015.

NIH/National Cancer Institute, NCI-A, NCI Parent Subcommittee A – Cancer Centers. December 11, 2014.

NIH/National Cancer Institute, Initial Review Group, Site Visit Review Committee NCI-A RTRB-L (R1). Harold C. Simmons Cancer Center/UT Southwestern Medical Center, Dallas, TX. September 22-24, 2014.

NIH/National Institute for General Medical Sciences, Initial Review Group, ZGM1 TWD-A(C1) COBRE Review meeting, July 10, 2014.

NIH/National Cancer Institute, Initial Review Group, ZCA1 RTRB-L (M1), NCI Omnibus: Drug Development, March 19-20, 2014.

United States Department of Agriculture/Agricultural Research Service (USDA/ARS), Office of Scientific Quality Review, National Program 107 – Human Nutrition. Chair of Panel 13, March 18, 2014.

NIH/National Institute of General Medical Sciences, Initial Review Group, ZGM1 PPBC-A NP, Genomes to Natural Products. November 14, 2013.

NIH/National Institute of General Medical Sciences, Initial Review Group, ZGM1 TWD-A (C1) COBRE I Review meeting, June 25-26, 2013.

NIH/National Center for Complementary and Alternative Medicine. ZAT1 SM 29, Mechanistic Research on CAM Natural Products (R01) September 13, 2013.

NIH/National Center for Complementary and Alternative Medicine. ZAT1 SM 28 PAR 12-151 Centers of Excellence for Research on Complementary Alternative Medicine (P01) Review panel member, January 16-18, 2013.

NIH/National Cancer Institute, Initial Review Group, Site Visit Review Committee NCI-A RTRB-L (E2). Case Western Reserve University Comprehensive Consortium Cancer Center, Cleveland, OH. October 22-24, 2012.

National Institutes of Health Intramural Center for Tobacco Regulatory Science, Award Program Review. October 22, 2012.

NIH/National Institute of General Medical Sciences, Initial Review Group, ZGM1 TWD-A COBRE Review meeting, June 19-20, 2012.

NIH/National Cancer Institute, Initial Review Group, Site Visit Review Committee NCI-A RTRB-L (E1). University of Michigan Cancer Center, Ann Arbor, MI. October 4-6, 2011.

NIH/National Cancer Institute, Initial Review Group, Site Visit Review Committee NCI-A RTRB-H (22). University of Colorado Cancer Center, 2 P30 CA046934-24. Aurora, CO. June 14-16, 2011.

National Institutes of Health, Center for Scientific Review, ZRG1 OTC-H (14) Oncology 2 – Translational Clinical IRG. March 15-16, 2011.

National Institutes of Health, Center for Scientific Review Special Emphasis Panel, ZRG1 OTC-B (02) M Cancer Prevention. September 3, 2010.

National Institutes of Health, Center for Scientific Review, Oncology 2 – Translational Clinical Integrated Review Group. Cancer Biomarkers Study Section (CBSS), Alexandria, VA. June 7-8, 2010.

NIH/National Cancer Institute, Site Visit Review Committee, University of Pittsburgh Cancer Institute, ZCA1 RTRB-L (E3) 2 P30 CA047904-22. Pittsburgh, PA. February 16-18, 2010.

National Institutes of Health, Center for Scientific Review, Oncology 2 – Translational Clinical Integrated Review Group. Cancer Biomarkers Study Section (CBSS), Alexandria, VA. February 1-2, 2010.

National Institutes of Health, Center for Scientific Review, ZRG1 OTC-B 02 M, Cancer Prevention. September 22, 2009.

National Institutes of Health, Center for Scientific Review, ZRG1 OTC-B 97 M, Cancer Therapy ARRA-CA. July 16, 2009.

National Institutes of Health, Center for Scientific Review, ZRG1 BCMB-P (58) R; Road Map: Challenge Grants Panel 5. July 20-21, 2009.

National Institutes of Health, Center for Scientific Review, ZRG1 BST-J (52) R; Road Map: Development of Assays for High Throughput Screening. Chairperson of Review Panel, July 2008.

National Institutes of Health, Center for Scientific Review, ZRG1 BCMB-H 50 R; Road Map RM08-004: New Methodologies for Natural Products Chemistry. Review panel member, May 26-28, 2008.

National Institutes of Health, Center for Scientific Review Special Emphasis Panel, ZRG1 F09-B 20 L Oncology Fellowship. Review panel member February 28-29, 2008.

National Institutes of Health, Center for Scientific Review, ZRG1 BCMB-M 10 B, Chemistry Biophysics Special Emphasis Panel (successor to ZRG3 SSS-6). Review panel member 2006-present.

National Institutes of Health, National Center for Research Resources, Special Emphasis Panel ZRR1 BT-B 02, BT Review Meeting. Review panel member. June 12-13, 2007.

NIH/National Center for Research Resources Special Emphasis Panel ZRR1 BT-B, Biomedical Technology. Review panel member. March 2-3, 2006.

NIH/National Center for Research Resources Special Emphasis Panel ZRR1 BT-B, Biomedical Technology. Review panel member 2005.

National Institutes of Health, Center for Scientific Review, ZRG1 ONC-B 03, Dietary Factors and Cancer. Review panel member June 28, 2007.

National Institutes of Health, Center for Scientific Review, ZRG1 BCMB-M 10 B, Chemical Biophysics. SBIR/STTR Panel member. July 13-14, 2006.

National Institutes of Health, Center for Scientific Review, Biophysical and Chemical Sciences Review Group, ZRG1 SSS-6 and ZRG3 SSS-6 (reviewing analytical methods and instrument-based grant proposals). Review panel member 1996-2005.

- ZRG1 SSS-6 (10) Chemistry/Biophysics SBIR/STTR Panel. February 27-28, 2003
- ZRG1 SSS-6 (11) Chemistry/Biophysics SBIR/STTR Panel. June 25, 2003
- ZRG1 SSS-6 (10) Chemistry/Biophysics SBIR/STTR Panel. November 3-4, 2003

NIH/National Cancer Institute, Rapid Access to Intervention Development (RAID) Program. Review panel member 2005.

NIH/National Center for Research Resources, Special Emphasis Panel ZRR1 BT-6 01. Review panel member, October, 2005.

NIH/National Center for Research Resources Special Emphasis Panel ZRG1 Onc-L (03)M Cancer Biomarkers. Review panel member June, 2005.

National Institute of Environmental Health Sciences Review Committee. Site visit to Oregon State University. Corvallis, OR. May 23-25, 2005.

National Institutes of Health, Center for Scientific Review Special Emphasis Panel, ZRG SSS-6 (12). Chairperson of Chemistry/Biophysics SBIR/STTR Panel. August 11, 2004.

National Institutes of Health, Center for Scientific Review Special Emphasis Panel, ZRG1 TME (04). Cancer Drug Discovery and Delivery. Review panel member, January 2004.

NIH/National Center for Complementary and Alternative Medicine. ZAT1 CP (12) Training/education. Review panel member, November, 2003.

NIH/Center for Scientific Review Special Emphasis Panel ZRG1 SSS-1 (02). Drug Design and Delivery Systems. Review panel member, July 23, 2003.

NIH/National Cancer Institute, Special Emphasis Panel. ZCA1 SRRB-K J2 S, Small Grants Program for Cancer Epidemiology and Cancer Prevention Research. December 3-4, 2002.

NIH/National Center on Complementary and Alternative Medicine ad hoc Working Group on Research on PC-SPES for prostate cancer: Developing a Strategy. Bethesda, MD. August 12, 2002.

NIH/National Cancer Institute, Special Emphasis Panel. ZCA1 SRRB-Y (J2) RFA 01-020 Shared Resources for Scientists not at NCI Funded Centers. November 13-14, 2001.

NIH/National Cancer Institute, Special Emphasis Panel. SBIR Topic 178 Chemical Diversity-Based Methods Identifying New Tumor Markers or Probes. *Chairperson*. March 13, 2000.

NIH/National Cancer Institute, Subcommittee C – Basic & Preclinical Program grants. Review panel member, September 19, 2000.

United States Department of Agriculture (USDA), National Research Initiative Competitive Grants Program (NRICGP) Improving Human Nutrition. Reviewer. March 15, 2000.

NIH/National Cancer Institute, P01 Site Visit Committee, NCI-CGRB-F(T2) Omaha, NE. November 2-3, 1999.

NIH/National Cancer Institute, T32 Panel Review, June 30, 1999.

National Science Foundation, Analytical Separations and Measurement, Division of Chemistry, June 23, 1999.

NIH/National Cancer Institute, Special Emphasis Panel. NCI-BRA-40521 Cancer Drug Discovery: Diversity Generation and Smart Assays. Bethesda, MD. May 3-4, 1999.

NIH/National Cancer Institute, Special Review Committee ZCA1. Review panel member, December 14, 1997.

NIH/National Cancer Institute, Cancer Centers and Research Programs Review Committee, Subcommittee C. 1995-1997.

Grant proposal reviewer for the following non-Federal agencies:

Petroleum Research Fund

State of Georgia Consortium for Plan Biotechnology Research (2005)

State of Indiana 21st Century Fund (2004, 2005)

State of Kansas DEPSCoR

State of Maryland Technology Transfer Fund

Austrian Science Fund Translational Research Program (2004)

Canada Foundation for Innovation (2003-2004)

Swiss National Science Foundation (2015)

Ad hoc reviewer for the following scientific journals (approximately 35 papers/yr):

Analytical and Bioanalytical Chemistry

Analytical Biochemistry

Analytical Chemistry

AAPS Journal

Assay Drug Development and Technologies

Australian Journal of Chemistry

Biomedical Chromatography

British Journal of Cancer

Cancer Letters

Cancer Research

Chemical Research in Toxicology

Chemical Reviews

Clinical Chemistry

Chemico-Biological Interactions

Drug Metabolism and Disposition

European Journal of Pharmacology

Free Radical Biology and Medicine

In Vitro Cellular & Developmental Biology – Animal

International Journal of Mass Spectrometry

Journal of Agricultural and Food Chemistry

Journal of the American Society for Mass Spectrometry

Journal of AOAC International

Journal of Biomolecular Screening

Journal of Cellular Biochemistry

Journal of Chromatographic Science

Journal of Chromatography A

Journal of Chromatography B

Journal of Lipid Research

Journal of Mass Spectrometry

Journal of Medicinal Food

Journal of Medicinal Chemistry

Journal of Natural Products

Journal of Pharmaceutical and Biomedical Analysis
Journal of Proteome Research
Lipids
Molecular Nutrition & Food Research
Nature
Pharmaceutical Biology
Planta Medica
Rapid Communications in Mass Spectrometry
Talanta
Toxicology Letters
Xenobiotica

Judging and Promotion/Tenure Evaluation

Science fair judge at Immaculate Conception Grade School, Elmhurst, IL; 1995-present

Illinois Regional science fair judge, Joliet, IL; 2007-2011

Illinois State science fair judge, Champaign-Urbana, IL; 2008-2010

Promotion evaluation for the University of Kansas, School of Pharmacy, Lawrence, KS; 1999

Promotion and tenure evaluation for the University of Kansas Department of Chemistry, Lawrence, KS; 2002, 2004

Promotion and tenure evaluation for Oregon State University School of Pharmacy, Corvallis, OR; 2005

Promotion and tenure evaluation for Oregon State University Department of Chemistry and School of Pharmacy, Corvallis, OR; 2006

Promotion and tenure evaluation for Wake Forest University Department of Chemistry, Wake Forest, NC; 2006

Promotion and tenure evaluation for the University of North Carolina – Greensboro, Department of Chemistry and Biochemistry. Greensboro, NC; 2006

Promotion and tenure evaluation for the University of Georgia College of Pharmacy, Athens, GA; 1998, 2000, 2006

Promotion and tenure evaluation for Oregon State University Department of Chemistry and School of Pharmacy, Corvallis, OR; 2008

Promotion and tenure evaluation for University of Texas at Arlington Department of Chemistry and Biochemistry, Arlington, TX; 2010

Promotion and tenure evaluation for Mount Sinai School of Medicine, New York, NY; 2010

Promotion evaluation for Ohio State University College of Pharmacy, Columbus, OH; 2010.

Judge of graduate student posters at UIC College of Pharmacy Research Day, Chicago, IL; February 26, 2010; February 26, 2016

Promotion and tenure evaluation for Mount Sinai School of Medicine, Department of Genetics and Genomics Science, New York, NY; 2010

Promotion and tenure evaluation for University of Calgary, Department of Biochemistry & Molecular Biology, Calgary, Alberta, Canada; 2011

Promotion and tenure evaluation for University of Texas Health Sciences Center at San Antonio, San Antonio, TX; 2012

Promotion and tenure evaluation for Oregon State University Department of Chemistry, Corvallis, OR; 2013

Promotion and tenure evaluation for Oregon State University School of Pharmacy, Corvallis, OR; 2014

Promotion evaluation for University of Mississippi School of Pharmacy, Oxford, MS; 2015

Promotion and tenure evaluation for the University of Illinois College of Medicine, Chicago, IL; 2019

Promotion and tenure evaluation for the University of Delaware Department of Behavioral Health & Nutrition, Newark, DE; 2019

University Committee Membership at the University of Illinois

Research Resources Center Mass Spectrometry Advisory Committee; 1995-2016

Admissions Committee for the College of Pharmacy Professional Program; 1995-2001

Chairman of Admissions Committee for the College of Pharmacy Professional Program; 1997-1999

Chairman of Task Force on Enrollment Management for the College of Pharmacy; 1997-2000

Medicinal Chemistry Graduate Program Review Committee; 1999

Chairman of Dean's Advisory Committee for Department Head Review; 1999

Co-Chair of the Review Committee-Functional Foods for Health Program; 1999-2000

Search Committee for Program Coordinator of the UIC/NIH Center for Botanical Dietary Supplements Research; 1999-2000

Advisory Committee to the Head of the Department of Medicinal Chemistry and Pharmacognosy (1999-2001; 2004-2009; 2010-2012) elected position

Dept. of Medicinal Chemistry and Pharmacognosy Faculty Search Committee; 2000-2001

Medicinal Chemistry Graduate Program Revision Committee: Analytical Toxicology Working Group; 2000-2001

Campus Research Board Basic Life Sciences Subcommittee; 2001-2009

Search Committee for Director of Mass Spectrometry for the Research Resources Center; 2000-2001

Search Committee for Mass Spectrometry Research Specialist for the RRC; 2001-2002

Dept. of Medicinal Chemistry and Pharmacognosy Faculty Activity Assessment Committee; 2001-2002

University of Illinois Cancer Center Committee on DNA Damage and Repair; 2001-2005

University of Illinois Cancer Center Committee on Preclinical Development of Anticancer Drugs; 2001-2002

University of Illinois Cancer Center Committee on Translational Science; 2007-2008

Executive Committee of the Dean of the College of Pharmacy; 2001-2008

Dept. of Medicinal Chemistry and Pharmacognosy Faculty Activity Assessment Committee; 2001-2002

Award Committee for Vahlteich Endowment Program Research Funding Competition; 2000-2002

UI Integrate (university system-wide electronic database implementation): Decision Support Principal Investigators Focus Group; 2002

College of Pharmacy Strategic Planning Committee; 2002-2003

Dept. of Medicinal Chemistry and Pharmacognosy Head Search Committee; 2002-2003
 Dept. of Medicinal Chemistry and Pharmacognosy Faculty Search Committee; 2001-2002
 Dept. of Medicinal Chemistry and Pharmacognosy Medicinal Chemistry Faculty Search Committee, 2002-2003
 College of Pharmacy Riback Research Poster Forum Review Committee; 2003
 Chicago Biomedical Consortium Proteomics-Informatics Advisory Board; 2003-2007
 Vice Chancellor for Research Search Committee in Proteomics/Bioinformatics 2007-2009
 College of Pharmacy, Dept. of Medicinal Chemistry and Pharmacognosy Committee on Major Equipment/Instruments; 2003-2004
 College of Pharmacy, Dept. of Medicinal Chemistry and Pharmacognosy Promotion and Tenure Committee; 2001-2003 (Chair); 2006-2008; 2010-2011; 2011-2012 (Chair); 2013
 College of Pharmacy, Dept. of Medicinal Chemistry and Pharmacognosy Technical Resources Committee; 2004-present
 UIC Major Instrumentation Internal Competition Review Panel; 2004
 College of Pharmacy Research Conflict of Interest Management Advisory Committee; 2008-2017
 College of Pharmacy Committee on Committees, 2006-2008; Chair 2009-2010
 College of Pharmacy Riback Scholarship Review Committee; 2010
 Chancellor's Award Graduate Student Fellowship Nominations Review 2012

Committee Membership at Oregon State University

Biomedical Faculty Group Leader. Global Hemp Innovation Center, Oregon State University, 2019-present
 Linus Pauling Institute Staff Search Committees, 2018-present
 Chair, Scientific Committee for 10th Biennial Linus Pauling Institute International Conference, 2019
 Linus Pauling Institute Communications Committee, 2018-2020
 OSU Vice President for Research Mass Spectrometry Facilities Review Committee, 2018
 Pauling Legacy Award Selection Committee, 2019
 Department of Pharmaceutical Sciences Graduate Studies Committee, 2019-present

Committee Membership at Johns Hopkins University School of Medicine

Graduate Student Association: President 1982-1983
 Graduate Student Association: Treasurer 1983-1984
 Graduate Student Association: Secretary/Newsletter Editor 1981-1982

Media Coverage and Interviews

Functional Foods for Health News. 5(4) Tomato-Prostate Study at UIC. July 1998.
 Chicago NBC television affiliate Channel 5 WMAQ interview concerning functional foods for health and cancer prevention. January 15, 1998
Chicago Sun-Times front page article containing interview about the UIC/NIH Botanical Center, "Herbal therapy to get serious study." October 6, 1999
 National radio talk show interview concerning the UIC/NIH Botanical Center, "Here's to Your Health," hosted by Deborah Ray. October 26, 1999
Nature news article quotation concerning ginseng dietary supplements, "Getting to the root of ginseng." June 20, 2001

Chicago CBS television affiliate Channel 2 WBBM interview and lab demonstration using LC-MS-MS concerning the quality of pharmaceuticals imported by consumers from other countries. "On Call with Dr. Breen." Broadcast June 25, 2001

Chicago CBS television affiliate Channel 2 WBBM interview about lycopene chemoprevention research on program, "On Call with Dr. Breen." June 30, 2002

Arizona Daily Star interview and quotation regarding combinatorial chemistry and high throughput screening in the pharmaceutical industry, "Sanofi buys Aventis for \$65B Deal's effect on local facility is not known." April 27, 2004

Chicago ABC television affiliate Channel 7 WLS interview about hops and chemoprevention on "Healthbeat" news segment. February 7, 2008

Inside Laboratory Management (AOAC International) Vol 12(8) November/December 2008. Wiley award address and symposium: the rise of HPLC-MS.

Chemical & Engineering News interview and quotations regarding safety of botanical dietary supplements. "Supplementing knowledge. Researchers seek to understand safety of botanical dietary supplements." Celia Henry Arnoud. July 19, 2010

Fox News.com, LiveScience. "Experts question safety of dietary supplements." Quoted in on-line news article. July 26, 2010

Times of India news article, "Tomatoes help prevent prostate cancer," about lycopene clinical trial published in *Cancer Prevention Research*. September 20, 2011

UIC News article, "Diets rich in tomatoes could reduce risk of prostate cancer," about lycopene clinical trial published in *Cancer Prevention Research*. *UIC News*, Vol. 30(5), September 21, 2011

UIC Pharmacist Vol. 35(1) Winter 2012 news article, "Lycopene may help prevent prostate cancer in African Americans." Sam Hostettler.

Chemical & Engineering News. 90(37): 30-31. "Bringing blue to a plate near you," about PepsiCo-funded research in van Breemen laboratory to find new natural product blue food and beverage coloring agents. September 30, 2012

Chemical & Engineering News. 91(11): 12-17. "Botanical scrutiny, Doubts about safety and efficacy push researcher to hone analysis of dietary supplements." March 18, 2013.

DSN-Drug Store News <http://drugstorenews.com/article/nih-funds-research-prevent-side-effects-caused-drug-herb-interactions-menopausal-women> "NIH funds drug-herb interaction research at University of Illinois at Chicago College of Pharmacy." Highlights research at the UIC/NIH Botanical Center Project 3 and reports on the new NIH/NCCAM T32 training grant. April 5, 2013.

DSN-Drug Store News <http://drugstorenews.com/article/nih-funds-research-prevent-side-effects-caused-drug-herb-interactions-menopausal-women> "Natural medicine education on the rise." June 10, 2013. Highlights NIH/NCCAM T32 grant (PI van Breemen) for graduate education in natural products NCCAM.

Cancer Prev. Res. (Phila.) "Perspective" editorial by Sporn and Liby accompanied our research Qiu X, Yuan Y, Vaishnav A, Tessel MA, Nonn L, van Breemen RB. Effects of lycopene on protein expression in human primary prostatic epithelial cells (March 3, 2013) in this issue.

Wall Street Journal. June 10, 2013 (print and on-line) “The secret to tomato sauce’s power,” by Ann Lukits. Highlighted results from our lycopene proteomics paper in 2013 *Cancer Prev. Res. (Phila.)*.

Daily Mail. June 7, 2013 <http://dailym.ai/170ap5b> “Tomatoes could ease night-times for prostate patients by relieving pressure on the bladder.” Highlighted results from our lycopene proteomics paper in 2013 *Cancer Prev. Res. (Phila.)*.

SWINS June 7, 2013. <http://bit.ly/19m1quU> “Tomato super ingredient lycopene can ‘stop men urinating in the night.’” Highlighted results from our lycopene proteomics paper in 2013 *Cancer Prev. Res. (Phila.)* and included quotes from interview.

Shimadzu Journal, January 2014, Volume 2(1). “Insight from a customer.” Interview concerning mass spectrometry-based research on natural products.

Nutrition Frontiers, Winter 2014; 5(1):3. National Cancer Institute, Division of Nutrition. Spotlight: Richard B. van Breemen.

National Public Radio (NPR) Here and Now, February 3, 2015 <http://hereandnow.wbur.org/2015/02/03/nutritional-supplements-fda> “When it comes to nutritional supplements, it’s ‘buyer beware.’”

Business Insider, June 24, 2015. Tanya Lewis, “Rumors are circulating that certain types of beer give you ‘man boobs.’” Highlighted Botanical Center studies of hops for women’s health and included quotes from interview.

Academic Pharmacy NOW, 2015 Volume 8(5). “The power of plants. UIC will use \$10M in federal grants to study botanicals for human health.” Included photo and discussed competitive renewal of Botanical Center NIH grant.

Wall Street Journal February 29, 2016 <http://www.wsj.com/articles/what-you-should-know-about-how-your-supplements-interact-with-prescription-drugs-1456777548> “How Your Supplements Interact With Prescription Drugs.” Highlighted the preclinical and clinical research on drug-botanical interactions in our NIH-funded Botanical Center and included quotes from interview.

ScienceLine April 11, 2016 <http://scienceline.org/2016/04/finding-real-relief/> “Finding Real Relief: The Search for an Effective Dietary Supplement.” Highlighted research in the van Breemen laboratory regarding botanical dietary supplements for women’s health.

Shimadzu International Journal, MOMENTUM, 2016; Volume 4: 4-11. Cover article. <http://shimadzu.com/about/magazine/i7rr0a00000099rg-att/od0gjn0000006nqr.pdf> “Inspiration from Natural Sources, Spotlight on the Work of Richard van Breemen.”

American Chemical Society. August 21, 2017. “Licorice is a hot trend in hot flashes, but could interact with medications.” Press release and YouTube press conference: <https://www.youtube.com/watch?v=uwj3fJ7I2KA&list=PLLG7h7fPoH8IE5bjJfnxCxLRCd1ggBt1X&index=3>

MPR News. August 22, 2017. “Licorice supplements may put patients at risk for drug interactions.” By Steve Duffy. <http://www.empr.com/news/licorice-dietary-supplementation-drug-interaction-menopause-hrt/article/683562/>

CTV News. August 22, 2017. "Licorice for menopausal symptoms could interfere with other medications." <http://www.ctvnews.ca/health/licorice-for-menopausal-symptoms-could-interfere-with-other-medications-1.3556214>

Science. May 3, 2019. 364(6439): 424-429. "The new blue. Meet the blue crew, scientists trying to give food, flowers, and more a color rarely found in nature." Kai Kupferschmidt. <https://www.sciencemag.org/news/2019/05/meet-blue-crew-scientists-trying-give-food-flowers-and-more-color-rarely-found-nature>

Consumer Reports. October 30, 2019. "Shop smarter for supplements." Kevin Loria <https://www.consumerreports.org/supplements/shop-smarter-for-supplements/>

Steve Lundeberg. Oregon State University. We love coffee, tea, chocolate and soft drinks so much, caffeine is literally in our blood. November 25, 2019. <https://today.oregonstate.edu/news/we-love-coffee-tea-chocolate-and-soft-drinks-so-much-caffeine-literally-our-blood>

Newsweek. November 28, 2019. Rosie McCall. "70 Percent of pure human blood ready for transfusion found to contain Xanax." <https://www.newsweek.com/70-percent-human-blood-ready-transfusion-contain-xanax-1474604>

Steve Lundeberg. Oregon State University. Good news for menopausal women taking hops supplements. May 19, 2020. <https://medicalxpress.com/news/2020-05-good-news-menopausal-women-supplements.html>

WEBINARS

van Breemen, RB. Enhancing bioavailability of curcuminoids from turmeric: Pitfalls & lessons for the future. October 3, 2019. https://onlinexperiences.com/scripts/Server.nxp?LASCmd=AI:4;F:QS!10100&ShowUUID=09F29AF3-2A9B-4F23-88ED-52D78326B276&AffiliateData=Naturex_E-mails

INVITED SEMINARS

van Breemen, RB. Electrophilic reactions of 1-*O*-acyl glucuronides. E. I. DuPont de Nemours and Co., Wilmington, DE; December 5, 1984.

van Breemen, RB. Electrophilic reactions of 1-*O*-acyl glucuronides." Department of Pharmacology and Experimental Therapeutics, Johns Hopkins University School of Medicine, Baltimore, MD; March 27, 1985.

van Breemen, RB. Acyl-linked glucuronides as reactive metabolites. Ciba-Geigy Corp., Greensboro, NC; January 29, 1985.

van Breemen, RB. Electrophilic reactions of 1-*O*-acyl glucuronides." Merck, Sharp and Dohme, Rahway, NJ; January 31, 1985.

van Breemen, RB. Electrophilic reactions of 1-*O*-acyl glucuronides. Department of Chemistry, North Carolina State University, Raleigh, NC; April 16, 1985.

van Breemen, RB. Middle molecule mass spectrometry: FAB with a magnetic sector instrument. Greater Washington Area Mass Spectrometry Discussion Group. Johns Hopkins University School of Medicine, Baltimore, MD; October 21, 1985.

van Breemen, RB. Activated phase II metabolites: Comparison of acylation by acyl glucuronides and acyl sulfates. Department of Biochemistry, North Carolina State University; September 25, 1986.

van Breemen, RB. Application of mass spectrometry to biotechnology. Department of Chemistry, University of Maryland at Baltimore County; October 6, 1987.

van Breemen, RB. Styrene oxide alkylation of human serum albumin determined by fast atom bombardment mass Spectrometry. Department of Pharmacology, Mayo Foundation and Clinic, Rochester, MN; October 17, 1988.

van Breemen, RB. Applications of mass spectrometry to biotechnology: Oxygenation of organic pollutants using immobilized enzymes. Department of Chemistry, Duke University, Durham, NC; September 22, 1989.

van Breemen, RB. Continuous-flow fast atom bombardment mass spectrometry of peptides and oligonucleotides. Department of Drug Metabolism, Glaxo, Inc., Research Triangle Park, NC; November 8, 1990.

van Breemen, RB. Applications of continuous-flow fast atom bombardment LC-MS to pharmacology and biotechnology. Baxter/Scientific Products 1991 Chromatography Symposium, Durham, NC; October 8, 1991.

van Breemen, RB. Degradation of peptide drugs by immobilized digestive enzymes. Department of Chemistry, North Carolina State University, Raleigh, NC; October 21, 1991.

van Breemen, RB. Application of continuous-flow FAB to pharmacology and biotechnology. Triangle Area Mass Spectrometry Discussion Group, Duke University, Durham, NC; November 5, 1991.

van Breemen, RB. Degradation of peptide and protein drugs by immobilized proteases. Genentech Inc., South San Francisco, CA; February 28, 1992.

van Breemen, RB. Degradation of bioactive peptides by immobilized digestive proteases. Division of Pharmaceutics, School of Pharmacy, University of North Carolina, Chapel Hill, NC; March 24, 1992.

van Breemen, RB. Liquid chromatography and mass spectrometry of oligonucleotides. ISIS Pharmaceuticals, San Diego, CA; June 18, 1992.

van Breemen, RB. Degradation of peptide and protein drugs using immobilized intestinal and hepatic proteases." Division of Pharmaceutical Sciences, School of Pharmacy, University of Colorado, Denver, CO; May 4, 1993.

van Breemen, RB. Degradation of peptide drugs using immobilized intestinal and hepatic proteases. Department of Medicinal Chemistry and Pharmacognosy, University of Illinois at Chicago, Chicago, IL; July 28, 1993.

van Breemen, RB. Hydrolysis of peptide and protein drugs by immobilized digestive and hepatic proteases. Department of Drug Metabolism, Genentech, Inc., South San Francisco, CA; August 17, 1993.

van Breemen, RB. Identification of carotenoids in food and human plasma. Department of Epidemiology, University of North Carolina at Chapel Hill, Chapel Hill, NC; December 10, 1993.

van Breemen, RB. Electrospray liquid chromatography-mass spectrometry of carotenoids. Hewlett-Packard Bay Analytical Operation, Palo Alto, CA; September 12, 1994.

van Breemen, RB. Recent advances in liquid chromatography-mass spectrometry of carotenoids. Functional Foods for Health Program and Department of Chemistry, University of Illinois at Chicago; October 27, 1994.

van Breemen, RB. Electrospray and continuous-flow FAB LC/MS of carotenoids and other natural products. Chicago Chromatography Discussion Group and MCM Mass Spectrometry Discussion Group Joint Meeting, Gurnee, IL, February 16, 1995.

van Breemen, RB. Innovation in carotenoid analysis using LC/MS. Functional Foods for Health Program and the Division of Nutritional Sciences, University of Illinois, Urbana-Champaign, IL, September 18, 1995.

van Breemen, RB. Innovations in carotenoid analysis using liquid chromatography-mass spectrometry. Department of Chemistry, Loyola University of Chicago, Chicago, IL, September 28, 1995.

van Breemen, RB. Applications of mass spectrometry to peptide sequencing. Department of Pharmacology, University of Illinois at Chicago, Chicago, IL, January 16, 1996.

van Breemen, RB. Combinatorial library screening and measurement of ligand-receptor interactions using pulsed ultrafiltration (PUF)/mass spectrometry. Hewlett-Packard Company, Palo Alto, CA, January 23, 1996.

van Breemen, RB. Pulsed ultrafiltration: A new method for screening combinatorial libraries. Chiron Corporation, Emeryville, CA, January 24, 1996.

van Breemen, RB. Screening combinatorial libraries and quantification of ligand-receptor interactions using pulsed Ultrafiltration/Electrospray Mass Spectrometry. Finnigan MAT, San Jose, CA, January 25, 1996.

van Breemen, RB. Pulsed ultrafiltration/mass spectrometry: A new method for screening molecular diversity. Affymax, Inc., Santa Clara, CA, February 26, 1996.

van Breemen, RB. Screening molecular diversity using pulsed ultrafiltration mass spectrometry. Scios-Nova, Inc., Sunnyvale, CA, February 27, 1996.

van Breemen, RB. Combinatorial library screening and measurement of ligand-receptor interactions using pulsed ultrafiltration/mass spectrometry. Smith Kline Beecham Pharmaceuticals, King of Prussia, PA, March 14, 1996.

van Breemen, RB. Screening molecular diversity using pulsed ultrafiltration/mass spectrometry. Hewlett Packard Company, Little Falls, NJ, March 15, 1996.

van Breemen, RB. Pulsed ultrafiltration/mass spectrometry: A new method for screening molecular diversity. Scios-Nova, Inc., Mountain View, CA, April 11, 1996.

van Breemen RB. Identification, structure determination and quantitation of natural products using mass spectrometry. Department of Medicinal Chemistry and Pharmacognosy, University of Illinois College of Pharmacy, Chicago, IL, April 20, 1996.

van Breemen, RB. Combinatorial library screening using pulsed ultrafiltration/electrospray mass spectrometry. Micromass Inc., Portland, OR, May 14, 1996.

van Breemen, RB. Screening molecular diversity using pulsed ultrafiltration and electrospray mass spectrometry. Pharmacia & Upjohn Company, Kalamazoo, MI, June 24, 1996.

van Breemen, RB. Quantitation of ligand/receptor interactions using pulsed ultrafiltration. Hewlett-Packard GMBH. Waldbronn, Germany, August 26, 1996.

van Breemen, RB. Screening molecular diversity using pulsed ultrafiltration mass spectrometry. Pfizer Discovery Research Seminar, Pfizer Inc., Groton, CT, September 4, 1996.

van Breemen, RB. Pulsed ultrafiltration electrospray mass spectrometry: A new method for screening combinatorial libraries and measuring binding constants. Dupont Company Discovery Research Seminar Series. Wilmington, DE, November 12, 1996.

van Breemen, RB. Screening combinatorial libraries & quantification of ligand-receptor interactions using pulsed ultrafiltration-mass spectrometry. Pharmacia & Upjohn Company, Kalamazoo, MI, January 24, 1997.

van Breemen, RB. Screening combinatorial libraries using pulsed ultrafiltration-mass spectrometry. Glaxo-Wellcome Research and Development, Research Triangle Park, NC, June 24, 1997.

van Breemen, RB. Role of mass spectrometry in screening combinatorial libraries and measuring affinity constants. R. W. Johnson Pharmaceutical Research Institute, Spring House, PA, October 16, 1997.

van Breemen, RB. Drug discovery and rapid metabolic screening using pulsed ultrafiltration mass spectrometry. Department of Pharmaceutics and Pharmacodynamics, University of Illinois at Chicago, Chicago, IL, November 12, 1997.

van Breemen, RB. Fundamentals of liquid chromatography-tandem mass spectrometry. Part I: Liquid Chromatography-mass spectrometry. MediChem Inc., Lemont, IL, January 19, 1998.

van Breemen, RB. Drug discovery and metabolic screening using pulsed ultrafiltration mass spectrometry. Merck Research Laboratories, West Point, PA, January 27, 1998.

van Breemen, RB. Drug discovery and metabolic screening using pulsed ultrafiltration mass spectrometry. Merck & Co., Inc., Rahway, PA, January 28, 1998.

van Breemen, RB. Drug discovery and metabolic screening using pulsed ultrafiltration mass spectrometry. Pharmacology & Molecular Sciences Seminar, The Johns Hopkins University School of Medicine, Baltimore, MD, February 11, 1998.

van Breemen, RB. Fundamentals of liquid chromatography-tandem mass spectrometry. Part II: Tandem mass spectrometry. MediChem, Inc., Lemont, IL, March 27, 1998.

van Breemen, RB. High-throughput screening and metabolic profiling using pulsed ultrafiltration mass spectrometry. Department of Drug Metabolism, Abbott Laboratories, Abbott Park, IL; April 14, 1998.

van Breemen, RB. Drug discovery and rapid metabolic screening using pulsed ultrafiltration mass spectrometry. Department of Pharmaceutical Sciences, School of Pharmacy, University of Colorado Health Sciences Center, Denver, CO; April 20, 1998.

van Breemen, RB. Applications of pulsed ultrafiltration mass spectrometry to drug discovery and development. Department of Chemistry, Iowa State University, Ames, IA; May 22, 1998.

van Breemen, RB. Liquid chromatography-mass spectrometry of retinoids and carotenoids. Department of Biochemistry, Iowa State University, Ames, IA; May 22, 1998.

van Breemen, RB. Drug Discovery and Screening for Metabolism & Toxicity Using Ultrafiltration-Mass Spectrometry. Epix, Inc., Cambridge, MA; August 24, 1998.

van Breemen, RB. Pharmacologic, metabolic and toxicological screening using pulsed ultrafiltration mass spectrometry. Hewlett-Packard Company, Naperville, IL; January 27, 1999.

- van Breemen, RB. Affinity-mass spectrometric screening for drug discovery and development. 6th Annual Mass Spectrometry Symposium. Wyeth-Ayerst Research, Princeton, NJ; February 12, 1999.
- van Breemen, RB. Drug discovery and screening for metabolism and toxicity using pulsed ultrafiltration mass spectrometry. Department of Pharmacology, University of Illinois at Chicago, Chicago, IL; August 6, 1999.
- van Breemen, RB. Prevention of DNA oxidation by dietary carotenoids. Department of Medicine, Endocrinology Section, University of Illinois College of Medicine, Chicago, IL; September 28, 1999.
- van Breemen, RB. Mass spectrometric assays for drug discovery and development. Division of Drug Discovery, Schering-Plough Pharmaceuticals, Kenilworth, NJ; October 19, 1999.
- van Breemen, RB. Prevention of DNA oxidation by dietary carotenoids. Department of Human Nutrition and Dietetics, University of Illinois at Chicago, Chicago, IL; November 1, 1999.
- van Breemen, RB. Botanical Center grant for dietary supplements. UIC Center of Excellence in Women's Health. University of Illinois Medical Center, Chicago, IL; February 25, 2000.
- van Breemen, RB. Center for dietary supplements research on botanicals and women's health. Site visit presentation for the Center of Excellence in Women's Health. University of Illinois at Chicago; April 7, 2000.
- van Breemen, RB. Drug discovery and development using ultrafiltration mass spectrometry. Division of Computational, Combinatorial and Medicinal Chemistry, Purdue Pharma, Princeton, NJ; May 24, 2000.
- van Breemen, RB. Botanicals in disease prevention and therapy. NOW Natural Foods, Bloomingdale, IL; June 17, 2000.
- van Breemen, RB. Screening for metabolism, toxicity and bioavailability. Botanical Research Centers Annual Meeting, Office of Dietary Supplements, National Institutes of Health. Bethesda, MD; July 13, 2000.
- van Breemen, RB. Natural products and combinatorial library screening using ultrafiltration mass spectrometry: Drug discovery, toxicity and metabolic profiling. Department of Biological, Chemical & Physical Sciences, Illinois Institute of Technology, Chicago, IL; October 16, 2000.
- van Breemen, RB. Quantification of carotenoids and retinoids using liquid chromatography-mass spectrometry: Analytical challenges in clinical studies of bioavailability, bioconversion and cancer prevention. Division of Human Nutrition and Epidemiology, Wageningen University, Wageningen, The Netherlands; December 7, 2000.
- van Breemen, RB. Natural products and combinatorial library screening using ultrafiltration mass spectrometry: Drug Discovery, Toxicity and Metabolic Profiling. University of Kansas, Department of Chemistry, Lawrence, KS; December 13, 2000.
- van Breemen, RB. Dietary supplements - current research and trends. Chicago Dietetic Association, Chicago, IL; March 14, 2001.
- van Breemen, RB. Role of mass spectrometry in clinical investigations of carotenoid bioavailability and prostate cancer chemoprevention. Medical College of Wisconsin, Milwaukee, WI; March 21, 2002.
- van Breemen, RB. Natural products and combinatorial library screening using ultrafiltration mass spectrometry: Drug discovery, toxicity and metabolic profiling. Argonne National Laboratory, Argonne, IL; August 8, 2002.

- van Breemen, RB. Mass spectrometry in clinical investigations of carotenoid bioavailability and prostate cancer. Department of Ophthalmology and Visual Sciences, University of Illinois Medical Center, Chicago, IL; November 13, 2002.
- van Breemen, RB. Carotenoid bioavailability and prostate cancer chemoprevention. Department of Pharmacology, University of Illinois Medical Center, Chicago, IL; February 5, 2003.
- van Breemen, RB. Screening using ultrafiltration mass spectrometry: Drug Discovery, Toxicity and metabolic profiling. Cumbre Inc., Dallas, TX; March 6, 2003.
- van Breemen, RB. Mass spectrometry-based screening for drug discovery, toxicity and metabolic profiling. Department of Chemistry, University of Kansas, Lawrence, KS; August 28, 2003.
- van Breemen, RB. Quantitative analysis of folates, carotenoids and DNA oxidation products in human blood and prostate tissue using LC-MS-MS. Finnigan Mass Spectrometry LC/MS Educational Seminar Series, Mundelein, IL; February 11, 2004.
- van Breemen, RB. Interactions of botanical dietary supplements with drug metabolizing enzymes. Nutritional Sciences Division, University of Illinois at Urbana-Champaign, IL; February 25, 2004.
- van Breemen, RB. Lycopene and prostate cancer prevention. Cancer Center Grand Rounds, University of Illinois Medical Center, Chicago, IL; September 16, 2004.
- van Breemen, RB. Applications of ultrafiltration mass spectrometry to drug discovery and metabolism. Midwest Mass Spectrometry Discussion Group, Department of Chemistry, Washington University in St. Louis, St. Louis, MO; September 28, 2004.
- van Breemen, RB. Covalent modifications of proteins by reactive drug metabolites and natural products. Department of Biological Sciences, Northern Illinois University, DeKalb, IL; October 1, 2004.
- van Breemen, RB. How do intermediate endpoint markers respond to lycopene in men with prostate cancer or benign prostate hyperplasia? Department of Medicinal Chemistry, College of Pharmacy, University of Washington, Seattle, WA; June 20, 2005.
- van Breemen, RB. Prostate cancer prevention using lycopene: Results of a phase II clinical trial in men using intermediate endpoint biomarkers. Division of Clinical Pharmacology, Indiana University School of Medicine, Indianapolis, IN; July 7, 2005.
- van Breemen, RB. Natural product drug discovery and development using ultrafiltration mass spectrometry. School of Pharmacy and Pharmaceutical Sciences, Purdue University, West Lafayette, IN; July 8, 2005.
- van Breemen, RB. Establishing the safety and efficacy of botanical dietary supplements for women's health. Hershey Foods Corporation, Hershey, PA; February 8, 2006.
- van Breemen, RB. Discovery and development of cancer chemoprevention agents. The Linus Pauling Institute Lecture Series, Oregon State University, Corvallis, OR; February 16, 2006.
- van Breemen, RB. Antioxidants in cocoa and effects of dietary supplements on biomarkers of oxidative stress. Hershey Company, Hershey, PA; March 22, 2007.
- van Breemen, RB. Identification of chemoprevention agents in cocoa. Hershey Company, Hershey, PA; February 21, 2008.
- van Breemen, RB. Screening complex natural product mixtures for antioxidants and chemopreventive agents. Kraft Foods Global, Glenview, IL; November 11, 2008.

van Breemen, RB. Screening complex natural products for chemopreventive agents. Chicago Chromatography Discussion Group and the Society for Applied Spectroscopy - Chicago. Elk Grove Village, IL; February 9, 2009.

van Breemen, RB. Applications of LC-MS-MS to the discovery and development of botanical natural products for cancer chemoprevention. Delaware Valley Mass Spectrometry Discussion Group, Villanova University, Villanova, PA; March 9, 2009.

van Breemen, RB. High performance natural product drug discovery using ultrafiltration IT-TOF MS. Shimadzu Biotech ASMS 2009 Dinner/Scientific Forum. Philadelphia, PA; May 30, 2009.

van Breemen, RB. Metabolism of natural product chemoprevention agents using ultrafiltration mass spectrometry. UIC Cancer Center Research Seminar Series, Carcinogenesis & Chemoprevention Program. Chicago, IL; June 10, 2009.

van Breemen, RB. Discovery and development of natural chemoprevention agents using LC-MS-MS. Washington-Baltimore Mass Spectrometry Discussion Group. Shimadzu Scientific Instrument Training Center, Columbia, MD; September 14, 2009.

van Breemen, RB. Role of mass spectrometry in ensuring the safety and efficacy of botanical dietary supplements. Chicago Mass Spectrometry Discussion Group. Northwestern University. Evanston, IL; April 13, 2010.

van Breemen, RB. Applications of LC-MS-MS to clinical trials of lycopene in the prevention of prostate cancer. AB Sciex New Mass Spectrometry Technology Seminar Series. University of Illinois College of Pharmacy. Chicago, IL; November 17, 2010.

van Breemen, RB. Botanical dietary supplements for women's health. Botanical Research Centers Annual Meeting, Office of Dietary Supplements, National Institutes of Health. Rockville, MD; November 9-10, 2010.

van Breemen, RB. Natural product drug discovery for cancer chemoprevention. PepsiCo, Long-Term Research. Valhalla, NY; March 3, 2011.

van Breemen, RB. Clinical trials of β -carotene bioavailability and lycopene chemoprevention of prostate cancer. PepsiCo, Long-Term Research. Valhalla, NY; March 3, 2011.

van Breemen, RB. Lycopene in the chemoprevention of prostate cancer. UIC Cancer Center Research Seminar Series, Carcinogenesis & Chemoprevention Program. Chicago, IL; March 10, 2011.

van Breemen, RB. Accelerating pharmacokinetics and clinical biomarker measurements of natural products using UHPLC MS-MS. Shimadzu ASMS 2011 Dinner Event. Denver, CO; June 4, 2011.

van Breemen, RB. Lycopene in the chemoprevention of prostate cancer. Novus International. St. Louis, MO; June 20, 2011.

van Breemen, RB. Botanical dietary supplements for women's health. NIH Botanical Research Centers Annual Meeting, Wake Forest University, Winston-Salem, NC; November 8-10, 2011.

van Breemen, RB. Ultra fast and sensitive: Shimadzu UHPLC-triple quadrupole mass spectrometers. Shimadzu ASMS 2012 Dinner Event. Vancouver, BC, Canada; May 19, 2012.

van Breemen, RB. Ultra fast mass spectrometry: Applications of UHPLC-triple quadrupole mass spectrometers. Shimadzu ASMS 2012 Breakfast Seminar. Vancouver, BC, Canada; May 22, 2012.

van Breemen, RB. Applications of Shimadzu LCMS-8040 and LCMS-8080 triple quadrupole mass spectrometers in Chicago. Shimadzu Corporation. Kyoto, Japan; September 14, 2012.

van Breemen, RB. Ultra fast and sensitive: Shimadzu UHPLC-triple quadrupole mass spectrometers. Shimadzu Luncheon Seminar, 19th International Mass Spectrometry Conference. Kyoto, Japan; September 19, 2012.

van Breemen, RB. Discovery and development of natural chemoprevention agents using LC-MS-MS. Chicago Mass Spectrometry Discussion Group. University of Illinois at Chicago, Chicago, IL; November 13, 2012.

van Breemen, RB. Ultra fast and sensitive: biomedical applications of UHPLC-triple quadrupole mass spectrometers. Sino-American Pharmaceutical Association Symposium, Accelerating Discovery: Technologies that Deliver. Shanghai, China; March 27, 2013.

van Breemen, RB. Ultra fast and sensitive: biomedical applications of UHPLC-triple quadrupole mass spectrometers. Sino-American Pharmaceutical Association Symposium, Accelerating Discovery: Technologies that Deliver. Beijing, China; March 29, 2013.

van Breemen, RB. Robert Cotter and the development of laser desorption time-of-flight mass spectrometry. Shimadzu ASMS 2013 Dinner Event. Minneapolis, MN; June 8, 2013.

van Breemen, RB. Safety and efficacy of botanical dietary supplements. Keynote speaker: Post-doctoral Research Symposium. University of Hawaii, College of Pharmacy, Hilo, HI; August 15, 2013.

van Breemen, RB. Botanical dietary supplements for women's health. NIH Botanical Research Centers Annual Meeting, Louisiana State University University, Baton Rouge, LA; November 3-5, 2013.

van Breemen, RB. Robert J. Cotter and the development of laser desorption time-of-flight mass spectrometry. Charles E. Dohme Memorial Symposium, Johns Hopkins University School of Medicine, Baltimore, MD. November 20, 2013.

van Breemen, RB. Safety and mechanisms of action of botanical dietary supplements for women's health. University of Iowa College of Pharmacy, Iowa City, IA. January 21, 2014.

van Breemen, RB. Interactions of botanical dietary supplements with drug metabolizing enzymes. Huazhong University of Science and Technology. Tanji School of Pharmacy. Wuhan, China. November 11, 2014.

van Breemen, RB. Development of safe and effective botanical dietary supplements. Department of Chemistry. Michigan State University. East Lansing, MI. April 17, 2015.

van Breemen, RB. Safe and effective botanical dietary supplements for women's health. College of Pharmacy, University of Florida. Gainesville, FL. December 4, 2015.

van Breemen, RB. Role of mass spectrometry in ensuring the safety and efficacy of botanical dietary supplements. MinnMASS Minnesota Mass Spectrometry Discussion Group. Department of Food Science, University of Minnesota, St. Paul, MN. December 9, 2015.

van Breemen, RB. Role of mass spectrometry in ensuring the safety and efficacy of botanical dietary supplements. University of Toledo College of Pharmacy and Pharmaceutical Sciences. Toledo, OH. January 28, 2016.

van Breemen, RB. Stakeholder panel for dietary supplements, background and fitness for purpose: vitamin B12. AOAC International Mid-Year Meeting. Gaithersburg, MD. March 17, 2016.

van Breemen, RB. The role of mass spectrometry in the development of safe and effective botanical dietary supplements. Department of Drug Discovery and Development, Harrison School of Pharmacy. Auburn University. Auburn, AL. April 12, 2016.

van Breemen, RB. Fast UHPLC-MS/MS analyses of botanical dietary supplements. Shimadzu Breakfast Seminar. 64th ASMS Conference on Mass Spectrometry and Allied Topics. San Antonio, TX. June 7, 2016.

van Breemen, RB. Role of mass spectrometry in the development of safe and effective botanical dietary supplements. Office of Clinical Pharmacology, Center for Drug Evaluation and Research, U.S. Food and Drug Administration. Silver Spring, MD. November 3, 2016.

van Breemen, RB. UIC Botanical Dietary Supplement Research Center: its influence on the commercial and research sectors. 62nd Meeting, National Advisory Council for Complementary and Integrative Health. NIH Campus, Bethesda, MD. June 2, 2017.

van Breemen RB. From the field to the clinic, the role of mass spectrometry in establishing safety and efficacy of botanical dietary supplements. New Jersey American Chemical Society and New Jersey Mass Spectrometry Discussion Group. Somerset, NJ. October 18, 2017. Keynote Speaker.

van Breemen RB. Botanical dietary supplements for women's health. National Institutes of Health, Bethesda, MD; January 29-30, 2018.

van Breemen, RB. From the field to the clinic, the role of mass spectrometry in establishing safety and efficacy of botanical dietary supplements. Oberlin College, Department of Chemistry and Biochemistry. February 14, 2018.

van Breemen, RB. Stakeholder panel for dietary supplements, background and fitness for purpose: resveratrol. AOAC International Mid-Year Meeting. Gaithersburg, MD. March 16, 2018.

van Breemen, RB. Advances in affinity selection mass spectrometry for characterizing active compounds in natural product mixtures. Washington-Baltimore Mass Spectrometry Discussion Group. Shimadzu Scientific Instrument Training Center, Columbia, MD; September 17, 2018.

van Breemen, RB. Botanical dietary supplements for women's health: Clinical Project 3 and Analytical Core. NIH Botanical Research Centers Annual Meeting. National Institutes of Health/Office of Dietary Supplements, North Bethesda, MD; May 6, 2019.

van Breemen, RB. Natural products affinity selection-mass spectrometry: Defining the bioactive compounds in complex mixtures. Arnold & Marie Schwartz College of Pharmacy and Health Sciences, Long Island University. Brooklyn, NY; January 17, 2020.

van Breemen, RB. Botanical dietary supplements for cognitive health and resilience. Rotary Club of Corvallis. Corvallis, OR; February 20, 2020.

ORGANIZATION OF SYMPOSIA AND MEETING SESSIONS

R. B. van Breemen. Session Chair: FAB and Flow-FAB. 39th ASMS Conference on Mass Spectrometry & Allied Topics. Nashville, TN, May 19-24, 1991.

R. B. van Breemen Organizer and Session Chair. 46th ASMS Conference on Mass Spectrometry & Allied Topics, Orlando, FL, May 31- June 4, 1998.

R. B. van Breemen and A. Buko, Organizers and Presiders. *Analytical Tools for Combinatorial Chemistry*. Full-day Symposium for the Analytical Division of the ACS. Morning Session, R. B.

van Breemen, Presiding. 222nd National Meeting of the American Chemical Society. Chicago, IL, August 30, 2001.

R. B. van Breemen, Organizer and Presider. *Metabolic Profiling Using MS*. Symposium. 55th ASMS Conference on Mass Spectrometry and Allied Topics. Indianapolis, IN: June 4, 2007.

R. B. van Breemen, Organizer and Presider. *Frank H. Field and Joe L. Franklin Award for Outstanding Achievement in Mass Spectrometry: Symposium in Honor of Robert J. Cotter*. 242nd American Chemical Society National Meeting and Exposition. Denver, CO, August 31, 2011.

R. B. van Breemen, Organizer and Presider. 60th ASMS Conference on Mass Spectrometry and Allied Topics. Vancouver, BC, Canada, May 21, 2012.

R. B. van Breemen, Organizer. 8th Annual NHRI Scientific Symposium. The Effectiveness of Natural Products for Women's Health. Chicago, IL, October 20, 2012.

J. L. Bolton and R. B. van Breemen, Organizers and Presiders. *Division of Chemical Toxicology Session: Biological Targets of Botanical Supplements*. 254th American Chemical Society National Meeting. Washington, DC, August 21, 2017.

R.B. van Breemen, Organizer and Host. 10th Biennial Linus Pauling Institute International Conference. Corvallis, OR, August 14-16, 2019.

INVITED CONFERENCE PAPERS (Since 1986)

van Breemen RB. Application of a double-focusing mass spectrometer to biotechnology. Southeastern Association of Analytical Chemists, North Carolina State University, Raleigh, NC, May 15-16, 1987.

van Breemen RB. Mass spectrometric methods for the characterization of oxygen-linked glucuronides. Workshop on Cellular and Molecular Aspects of Glucuronidation, Montpellier, FRANCE. April 28, 1988.

van Breemen RB. Peptide mapping of alkylated human serum albumin by fast atom bombardment mass Spectrometry. 27th Annual Eastern Analytical Symposium, New York City, NY, October 2-7, 1988.

van Breemen RB, Tsou Y, Connolly G. Oxygenation of dicyclopentadiene by immobilized bacterial enzymes. American Institute of Chemical Engineers Summer National Meeting, Philadelphia, PA. August 20-23, 1989.

van Breemen RB. Natural product applications of continuous-flow FAB mass spectrometry. NATO Advanced Study Institute on Mass Spectrometry in the Molecular Sciences. Cetraro, Italy. June 17-29, 1990. Invited participant.

van Breemen RB. Studies of dietary carotenoids and chlorophylls, and orally-active peptide drugs using continuous-flow fast atom bombardment mass spectrometry. 43rd Southeast Regional American Chemical Society Meeting, Richmond, VA. November 12-15, 1991.

van Breemen RB. HPLC-MS of carotenoids. Carotenoid Research Interactive Group (CARIG) Pre-EB '94 Conference. Anaheim, CA. April 24, 1994.

van Breemen RB, Huang C-R, Tan Y, Schilling AB. Comparison of APCI and electrospray LC-MS for carotenoid analysis and investigation of mechanisms of carotenoid ionization. 12th Montreux LC/MS Symposium, Hilton Head, SC. November 1-3, 1995.

van Breemen RB. Innovations in carotenoid analysis using liquid chromatography-mass spectrometry. 11th International Symposium on Carotenoids. Leiden, The Netherlands. August 18-23, 1996.

van Breemen RB. Pulsed ultrafiltration/mass spectrometry: a new method for screening molecular diversity. ISSX North American Meeting, San Diego, CA. October 20, 1996.

van Breemen RB. Liquid chromatography-mass spectrometry of carotenoids. Carotenoid Research Interactive Group (CARIG) Pre-EB '97 Conference. New Orleans, LA. April 6, 1997.

van Breemen RB. Screening combinatorial libraries and measuring ligand-receptor interactions using pulsed ultrafiltration mass spectrometry. Eighth International Symposium on Pharmaceutical and Biomedical Analysis. Orlando, FL. May 4-7, 1997.

van Breemen RB. Liquid chromatography-mass spectrometry of carotenoids: identification of dietary carotenoids in human serum and tissue. 88th American Oil Chemists Society, Seattle, WA. May 11-14, 1997. *This presentation was recognized with a best paper award by the AOCS.*

van Breemen RB. Pulsed ultrafiltration mass spectrometry: a new method for screening molecular diversity and combinatorial libraries. 1997 AAPS Southeast Regional Meeting. Research Triangle Park, NC. June 23, 1997.

van Breemen RB. Mass spectrometry-based strategies for screening combinatorial libraries for biological activities. ASMA Fall Workshop, The Role of Mass Spectrometry in Combinatorial Chemistry. San Diego, CA. October 3-4, 1997.

van Breemen RB. Applications of pulsed ultrafiltration mass spectrometry to drug discovery and development. 1997 AAPS Annual Meeting & Exposition. Boston, MA. November 2-6, 1997.

van Breemen RB.* Screening combinatorial libraries using pulsed ultrafiltration mass spectrometry. IBC's Conference on Protein Structure and Function. Coronado, CA. December 9-10, 1997.

*Chairperson for Session on Alternative Approaches.

van Breemen RB. Drug discovery and metabolic screening using pulsed ultrafiltration mass spectrometry. Gordon Conference on Medicinal Chemistry. Colby-Sawyer College, New London, NH. August 2-7, 1998.

van Breemen RB. Drug discovery and metabolic profiling of combinatorial libraries using pulsed ultrafiltration mass spectrometry. Symposium on the *Application of Mass Spectrometry in Drug Discovery Research*. 216th American Chemical Society National Meeting, Boston, MA. August 23-27, 1998.

van Breemen RB, Nikolic D, Fan P, Bolton JL. Rapid metabolic and toxicity screening of drugs using pulsed ultrafiltration mass spectrometry. Symposium on Affinity-Based Mass Spectrometry: Strategic Approaches for Dealing with Molecular Diversity. 37th Annual Eastern Analytical Symposium, Somerset, NJ. November 15-20, 1998.

van Breemen RB. High throughput mass spectrometric screening of new therapeutic agents for bioavailability, metabolism and toxicity. PITTCO '99, Orlando, FL. March 7-12, 1999.

van Breemen RB. Pulsed ultrafiltration mass spectrometry: applications to drug discovery and screening for metabolism and toxicity. The First Novartis Symposium on LC-MS and Related Technologies. Novartis Institute for Biomedical Research, East Hanover, NJ. April 12, 1999.

Pezzuto JM, Kosmeder JW, Lee SK, Mbawambo ZH, Chung HS, Luyengi L, Gamez LEJC, Mehta RG, Kinghorn AD, van Breemen RB. Evaluation of the antioxidant potential of natural products. 8th

Annual Functional Foods for Health Retreat, Indian Lakes Resort, Bloomingdale, IL. May 17-19, 1999.

van Breemen RB, Nikolic D, Fan PW, Bolton JL. High-throughput screening for drug discovery, metabolism, and toxicity using pulsed ultrafiltration mass spectrometry. CHI Sixth Annual High-Throughput Screening for Drug Discovery Conference, Washington, DC; May 3-5, 1999.

van Breemen RB. Screening natural products and combinatorial library mixtures using pulsed ultrafiltration mass spectrometry. IBC's 4th Annual Conference on Combinatorial Chemistry, from Concept to Clinic. La Jolla, CA. June 28-28, 1999.

van Breemen RB. Screening for drug metabolism and toxicity using pulsed ultrafiltration mass spectrometry. CPSA 1999 Symposium on Chemical and Pharmaceutical Analysis. Princeton, NJ. September 21-22, 1999.

van Breemen RB. Screening natural product and combinatorial library mixtures using pulsed ultrafiltration MS. CPSA 1999 Symposium on Chemical and Pharmaceutical Analysis. Princeton, NJ. September 21-22, 1999.

van Breemen RB. Integration of drug discovery and development using pulsed ultrafiltration mass spectrometry. Symposium on Mass Spectrometry Frontiers. Purdue University Department of Chemistry. October 7-9, 1999.

van Breemen RB. Cancer prevention by antioxidants: measurement of DNA oxidation products using LC-MS-MS as biomarkers for chemoprevention. Eastern Analytical Symposium. Somerset, NJ. November 15, 1999.

van Breemen RB. Metabolic screening using on-line pulsed ultrafiltration mass spectrometry. Eastern Analytical Symposium. Somerset, NJ. November 17, 1999.

van Breemen RB. The UIC/NIH Center for Botanical Dietary Supplements: assays for metabolism and bioavailability. Functional Foods for Health 9th Annual Retreat. Urbana, IL. May 15-17, 2000.

van Breemen RB, Nikolic D, Gu C. Natural products and combinatorial library screening using ultrafiltration mass spectrometry: Drug Discovery, Toxicity and Metabolic Profiling. LabAutomation 2001, Palm Springs, CA. January 27-31, 2001. Symposium Chair: Analytical High Throughput Screening.

van Breemen RB. Novel analytical approaches to natural product discovery and validation. Novartis Symposium on Traditional Chinese Medicines and Natural Products. Chicago, IL. January 22-23, 2001.

van Breemen RB. Biomolecular screening of natural products and combinatorial libraries using ultrafiltration mass spectrometry. Symposium on Mass Spectrometry and High Throughput Screening, New Jersey American Chemical Society, Mass Spectrometry Discussion Group of Northern New Jersey and Laboratory Robotics Interest Group of New Jersey. Somerset, NJ. February 13, 2001. Keynote Speaker.

van Breemen RB, Johnson BM, Bolton JL, Yu C, Shin YG. High throughput metabolic and toxicity screening of botanical extracts and combinatorial libraries. 222nd National Meeting of the American Chemical Society. Chicago, IL. August 26-30, 2001.

van Breemen RB, Johnson, BM, Shin YG, Nikolic D. Natural products and combinatorial library screening using ultrafiltration mass spectrometry: Drug Discovery, Toxicity and Metabolic Profiling. Instrumental Methods of Analysis: Modern Trends and Applications. Ioannina, Greece. September 5-8, 2001.

van Breemen RB. High throughput screening to assess metabolism, toxicity, and bioavailability. International Convention on Pharmaceutical Sciences Commemorating the 50th Anniversary of the Pharmaceutical Society of Korea. Seoul, Korea. October 18-19, 2001.

Pezzuto JP, Yu C, van Breemen RB. Metabolism of resveratrol. 26th International Symposium on High Performance Liquid Phase Separations and Related Techniques. Montreal, Canada. June 2-7, 2002.

van Breemen RB. In vitro screening of botanical dietary supplements and pharmaceuticals for metabolic activation to electrophilic metabolites: validation by detection of corresponding mercapturates in urine. Functional Foods for Health 12th Annual Conference, Schaumburg, IL. July 9-11, 2003.

van Breemen RB. Mechanism-based screening methods for natural product lead discovery. Symposium in Panama City on Contemporary Methods for Drug Discovery and Evaluation, Panama City, Panama. December 1-5, 2003.

van Breemen RB. Covalent modification of proteins. Chicago Biomedical Consortium Proteomics Symposium 2004. Chicago, IL. April 17, 2004.

van Breemen RB. Quantitative analysis of carotenoids and DNA oxidation products in human tissues using LC-MS. Thermo Electron Customer Forum at 52nd ASMS Conference on Mass Spectrometry and Allied Topics. Nashville, TN. May 23, 2004.

van Breemen RB. How do intermediate endpoint markers respond to lycopene in men with prostate cancer or benign prostate hyperplasia? Promises and Perils of Lycopene/Tomato Supplementation and Cancer Prevention. National Cancer Institute, Bethesda, MD. February 17-18, 2005.

van Breemen RB, Farnsworth NR, Fong HHS, Pauli G. Authentication of herbs and herbal products. 229th American Chemical Society National Meeting, Symposium on Authentication of Food and Wine. San Diego, CA. March 13-17, 2005.

van Breemen RB. FT-ICR mass spectrometry and proteomics. The 2005 CBC "Proteomics & Informatics Symposium. Northwestern University, Evanston, IL. April 22, 2005.

van Breemen RB. Mass spectrometry-based bioassays. American Society of Pharmacognosy 46th Annual Meeting, Symposium for Young Investigators. Oregon State University, Corvallis, OR. July 23-27, 2005.

van Breemen RB. Standardization, screening and clinical evaluation of estrogenic isoflavones in red clover (*Trifolium pratense*) for women's health. Symposium: Standardization of the Terminology for Expression of Analytical Results for Isoflavones. University of Mississippi, Oxford, MS. August 21, 2006.

van Breemen RB. Analytical approaches for the authentication and evaluation of the safety of botanical dietary supplements. 5th Oxford International Conference on the Science of Botanicals (ICSB). University of Mississippi, Oxford, MS. August 21-24, 2006.

van Breemen, RB. Quantitative analysis of carotenoids using LC-MS-MS: Application to a clinical trial of prostate cancer chemoprevention by lycopene. Gordon Research Conference, Carotenoids. Ventura, CA. January 7-12, 2007.

van Breemen RB. Drug discovery and development using ultrafiltration mass spectrometry. PITTCON Conference & Expo 2007. Chicago, IL. February 25-March 2, 2007.

- van Breemen RB, Fong HHS, Farnsworth. "Ensuring the safety of botanical dietary supplements." Experimental Biology 2007. Washington, DC. April 27-May 2, 2007.
- Farnsworth NR, Krause EC, van Breemen RB, Graham JG. UIC / NIH Center for Botanical Dietary Supplements Research – translational research: from plant to clinical use. Experimental Biology 2007. Washington, DC. April 27-May 2, 2007.
- van Breemen RB. Analysis, bioavailability and bioconversion of dietary carotenoids and folates using liquid chromatography-mass spectrometry and plateau isotopic enrichment. AOAC International Midwest Section Meeting. Matteson, IL. May 21-23, 2007.
- van Breemen RB, Bolton JL, Farnsworth NR. Mechanism of action, estrogenic activity and toxicology screening of black cohosh dietary supplements."Black Cohosh Safety Workshop. Gaithersburg, MD. June 28, 2007.
- van Breemen RB, Pauli G, Bolton JL, Schulman L, Farnsworth NR. From botanical authentication to phase I clinical evaluation, botanical dietary supplements for women's health. Symposium on Clinical Pharmacognosy: Contribution of Pharmacognosy to the Quality of Clinical Trials of Botanicals and Dietary Supplements. 48th Annual American Society of Pharmacognosy Conference. Portland, ME. July 14, 2007.
- van Breemen RB. Reactions of electrophilic drug metabolites: assays for detection and potential toxicity pathways. Applied Pharmaceutical Analysis. Harvard Medical School, Boston, MA. September 17-21, 2007.
- van Breemen RB. History of mass spectrometry-based proteomics. Second Chicago Biomedical Consortium Proteomics Workshop. Chicago, IL. August 4, 2008.
- van Breemen RB. Investigation of the metabolism of natural product chemoprevention agents using ultrafiltration mass spectrometry. 4th Annual Meeting of the Great Lakes Drug Metabolism Discussion Group. Lincolnshire, IL. April 30-May 1, 2009.
- van Breemen RB. Enhancing the throughput of discovery PK using high resolution ultrafiltration LC-MS. 57th ASMS Conference on Mass Spectrometry and Allied Topics. Philadelphia, PA. May 31-June 4, 2009.
- van Breemen RB. Introduction to mass spectrometry: historical and modern perspective. Third Chicago Biomedical Consortium Summer Workshop in Proteomics and Informatics. Chicago, IL. August 3, 2009.
- van Breemen RB. New approaches to measurement of botanicals. UIC/NIH Symposium: Developments in Botanical Dietary Supplements Research from 1994 to Today. Chicago, IL. March 23, 2010.
- van Breemen RB. History of proteomics mass spectrometry. Fourth Chicago Biomedical Consortium Summer Workshop in Proteomics and Informatics. Chicago, IL. August 2, 2010.
- van Breemen, RB. Introduction to mass spectrometry and proteomics. Fifth Chicago Biomedical Consortium Summer Workshop in Proteomics and Informatics. Chicago, IL. July 25, 2011.
- van Breemen RB. Screening complex natural product mixtures for antioxidants and chemopreventive agents. Conference on Small Molecule Science. Chapel Hill, NC. August 1-3, 2011.
- van Breemen RB, White J, Chen L, Pezzuto JM, Cushman M. Discovery of cancer chemoprevention agents targeting rexinoid and/or vitamin D receptors using ultrafiltration mass

spectrometry. 242nd American Chemical Society National Meeting. Denver, CO. August 31, 2011.

van Breemen RB. Botanical dietary supplements for women's health. 11th Annual Oxford International Conference on the Science of Botanicals. University of Mississippi, Oxford, MS. April 16-19, 2012.

van Breemen RB. Developing botanical dietary supplements for clinical evaluation. Integrative Medicine and Health 2012. Portland, OR. May 15-18, 2012.

van Breemen, RB. Introduction to mass spectrometry and proteomics. Sixth Chicago Biomedical Consortium Summer Workshop in Proteomics and Informatics. Chicago, IL. August 6, 2012.

Newsome AG, van Breemen RB. Isolation and characterization of natural blue pigments from underexplored sources. 244th American Chemical Society National Conference, Philadelphia, PA. August 19-23, 2012. This paper was featured in *Chemical & Engineering News*, 90(37): 30-31, 2012.

van Breemen RB. Safety and efficacy of botanical dietary supplements as alternatives to hormone replacement therapy. 8th Annual NHRI Scientific Symposium. Chicago, IL. October 20, 2012.

van Breemen RB. In vitro and in vivo dose responses in bioassays of estrogenic botanical dietary supplements for women's health. 12th Annual Oxford International Conference on the Science of Botanicals. University of Mississippi, Oxford, MS. April 15-18, 2013.

van Breemen RB. UHPLC with high performance tandem mass spectrometry for studies of botanical dietary supplement safety and efficacy. 54th Annual Meeting of the American Society of Pharmacognosy. St. Louis, MO. July 13-17, 2013.

van Breemen, RB. History of mass spectrometry proteomics. Seventh Chicago Biomedical Consortium Summer Workshop in Proteomics and Informatics. Chicago, IL. July 22, 2013.

van Breemen RB. Safety of botanical dietary supplements used by menopausal women: in vitro investigations of drug-botanical interactions. 55th Annual Meeting of the American Society of Pharmacognosy, and the 14th Oxford International Conference on the Science of Botanicals. Oxford, MS. August 2-6, 2014.

van Breemen RB. Interactions of botanical dietary supplements with drug metabolizing enzymes: application of UHPLC-MS/MS. 17th Annual Clinical & Pharmaceutical Solutions through Analysis (CPSA) USA. Langhorne, PA. September 29-October 2, 2014.

van Breemen RB. Biomedical applications of UHPLC-MS/MS using Shimadzu LCMS-8050 and LCMS-8040 ultrafast triple quadrupole mass spectrometers. 17th Annual Clinical & Pharmaceutical Solutions through Analysis (CPSA) USA. Langhorne, PA. September 29-October 2, 2014.

van Breemen RB. Development of safe and effective botanical dietary supplements for women's health. 54th Meeting of the Phytochemical Society of North America. Urbana-Champaign, IL. August 8-12, 2015.

van Breemen RB. Identification of active compounds in botanical dietary supplements. National Toxicology Program/National Institute of Environmental Health Sciences (NTP/NIEHS) Workshop: Addressing Challenges in the Assessment of Botanical Dietary Supplement Safety. Bethesda, MD. April 26-27, 2016.

van Breemen RB. Pharmacokinetic interactions between drugs and licorice botanical dietary supplements used by menopausal women. 2nd International Symposium of Functional Food and Plant Metabolism. Shanghai Chenshan Plant Science Research Center; Shanghai, China. December 14-15, 2016.

van Breemen RB. From botanical authentication through clinical evaluation, safety and efficacy of botanical dietary supplements. Varro E. Tyler Prize Award Lecture. 58th Annual Meeting of the American Society of Pharmacognosy. Portland, OR. July 29-August 2, 2017.

van Breemen RB and Tonsing-Carter AA. Pharmacokinetic interactions between drugs and licorice botanical dietary supplements used by menopausal women. 254th American Chemical Society National Meeting. Washington, DC. August 21, 2017.

van Breemen RB. Advances in affinity selection mass spectrometry for characterizing active compounds in natural product mixtures. 70th Pittsburgh Conference. PittCon 2019 Conference and Expo. Philadelphia, PA. March 17-21, 2019.

van Breemen RB. State of the Science Address: Natural products and environmental analysis. MSACL 2019 US 11th Annual Conference and Exhibits. Palm Springs, CA. April 2-4, 2019.

van Breemen RB. High-throughput affinity selection-mass spectrometry identification of pharmacologically active natural products in complex mixtures. Wiley Awards Symposium. AOAC International 133rd Annual Meeting & Exposition. Denver, CO. September 6-12, 2019.

SELECTED PRESENTATIONS (out of an average of 15 per year)

van Breemen RB, Smith LR. Synthesis of spirocyclic lactones: substituted 2-oxo-1,6-dioxapiro[4.4]nonanes. Cleveland Section, American Chemical Society. Cleveland, OH. April 16, 1980.

van Breemen RB, Fenselau CC. Metabolism of endo-dicyclopentadiene by immobilized cytochrome P450. 30th Annual Conference on Mass Spectrometry and Allied Topics. Honolulu, HI. June 6-11, 1982.

Cotter RJ, van Breemen R. Laser desorption mass spectrometry. 30th Annual Conference on Mass Spectrometry and Allied Topics. Honolulu, HI. June 6-11, 1982.

Cotter RJ, Tabet J-C, van Breemen R. Applications of laser desorption mass spectrometry. 32nd Annual Conference on Mass Spectrometry and Allied Topics. San Antonio, TX. May 27-June 1, 1984.

van Breemen RB, Fenselau C. Electrophilic reactions of acyl-linked glucuronides. FASEB (Pharmacology). Philadelphia, PA. April 3-7, 1984.

van Breemen RB, Fenselau C. Covalent binding of acyl-*O*-glucuronides. IUPHAR 9th International Congress of Pharmacology. London, UK. July 29 – August 3, 1984.

van Breemen RB, Fenselau C, Dulik DM. Activated phase II metabolites: Comparison of alkylation by 1-*O*-acyl glucuronides and acyl sulfates. Third International Symposium on Biological Reactive Intermediates. College Park, MD. June 6-8, 1985.

Demirev P, Alai M, van Breemen RB, Cotter R, Fenselau C. Fragmentation of heavy ions (5,000 – 7,000 daltons) generated by PD and FAB. SIMS V. Washington, DC. September 25, 1985.

van Breemen RB. Middle Molecule Mass Spectrometry: FAB with a sector magnet. Greater Washington Area Mass Spectrometry Discussion Group. Baltimore, MD. October 21, 1985.

Fenselau C, van Breemen RB, Bradow G, Dulik D. Phase II conjugates as biologically activated metabolites. 69th Canadian Chemical Conference. Saskatoon, Saskatchewan. June 1-4, 1986.

van Breemen RB. Application of a double focusing mass spectrometer to biotechnology. SEAAC-87. North Carolina State University, Raleigh, NC. May 15-16, 1987.

van Breemen RB, Creech J. Mapping of peptides from human serum albumin by FAB mass spectrometry. 35th ASMS Conference on Mass Spectrometry and Allied Topics. Denver, CO. May 24-29, 1987.

van Breemen RB, Martin LB, Schreiner AF. Analysis of monosubstituted group VI metal carbonyls by EI, DCI, FD, and FAB mass spectrometry. 35th ASMS Conference on Mass Spectrometry and Allied Topics. Denver, CO. May 24-29, 1987.

Freeman HS, van Breemen RB, Esancy JF, Ukponmwan DO, Hao Z, Hsu W-N. Fast atom bombardment and desorption chemical ionization in the analysis of involatile textile dyes. 1989 American Association of Textiles Chemists & Colorists (AATCC) International Conference & Exhibition. Philadelphia, PA. October 3-6, 1989.

van Breemen RB, Bartlett MG, Culver CA, Unger SE. Determination of the oral stability of drugs using immobilized digestive enzymes and liquid chromatography mass spectrometry. Third North American ISSX Meeting Modern Perspectives in Xenobiotic Metabolism. San Diego, CA, October 21-24, 1990.

van Breemen RB. Stability of orally administered peptide drugs. Gordon Research Conference on Drug Metabolism. Plymouth, NH. July 14-19, 1991,

van Breemen RB, Blackburn RK. Hydrolysis of peptide and protein drugs by immobilized hepatic proteases measured using Continuous-Flow FAB LC-MS and MS-MS. 41st ASMS Conference on Mass Spectrometry and Allied Topics. San Francisco, CA, May 30-June 4, 1993.

van Breemen RB, Schmitz HH, Schwartz SJ. Continuous-flow fast atom bombardment liquid chromatography/mass spectrometry of carotenoids. 10th International Symposium on Carotenoids. Trondheim, Norway. June 20-15, 1993.

van Breemen RB, Powers DD, Kilpatrick PK, Carbonell RG. Quantifying peptide adsorption at gas-liquid interfaces using fast atom bombardment mass Spectrometry. Mass Spectrometry in the Health & Life Sciences. San Francisco, CA, September 13-18, 1994.

van Breemen RB. Electrospray liquid chromatography-mass spectrometry of carotenoids. Gordon Conference on Carotenoids. Ventura, CA, February 5-10, 1995.

van Breemen RB, Huang C-R, Rimando A, Fong HHS, Fitzloff JF. Electrospray liquid chromatography/mass spectrometry of ginsenosides. 43rd ASMS Conference on Mass Spectrometry and Allied Topics. Atlanta, GA, May 21-26, 1995.

Wang R, Dai X, Li A, Klegerman ME, Huang CR, van Breemen, Groves MJ. Molecular weight determination of an antitumor glucan from *Mycobacterium bovis* GCG. AAPS Midwestern Regional Meeting. Chicago, IL, May 22, 1995.

van Breemen RB, Huang C-R, Lu Z-Z, Rimando A, Fong HHS, Fitzloff JF. Electrospray mass spectrometry of ginsenosides. 4th Annual University of Illinois Functional Foods for Health Conference. Itasca, IL. May 22-24, 1995.

van Breemen RB, Huang C-R, Tan Y, Schilling AB. Mechanisms of carotenoid ionization during electrospray and atmospheric pressure chemical ionization mass spectrometry. 210th American Chemical Society National Meeting, Chicago, IL, August 20-25, 1995.

van Breemen RB, Tan Y, Lai J, Huang, C-R, Zhao X. Affinity HPLC and electrospray mass spectrometric analysis of oligonucleotides. 1996 Pittsburgh Conference. Chicago, IL; March 3-8, 1996.

Kamath NS, van Breemen R, Constantinou A. 87th American Association of Cancer Research (AACR) Annual Meeting. Washington, DC, April 20-24, 1996.

van Breemen RB, Huang C-R, Nikolic D, Woodbury C, Zhao Y-Z, Venton D. Pulsed ultrafiltration/electrospray MS: A new method for screening combinatorial libraries. 44th ASMS Conference on Mass Spectrometry and Allied Topics. Portland, OR; May 12-16, 1996. Selected for oral session entitled, MS based strategies for characterizing biomolecule-ligand interactions.

Powers DD, Carbonell RG, van Breemen RB, Kilpatrick PK. Adsorption of peptides at air-liquid interfaces: Effects of structure and solution pH and ionic strength. American Institute of Chemical Engineers 1996 Annual Meeting. Chicago, IL; November 10-14, 1996.

Venton DL, van Breemen RB, Woodbury CP, Zhao Y-Z, Nikolic D. Screening solution-phase combinatorial libraries using pulsed ultrafiltration (PUF)/electrospray mass spectrometry. 1997 Conference and Expo. Atlanta, GA; March 16-21, 1997.

Zhao Y-Z, Nikolic D, Woodbury CP, van Breemen RB. Pulsed ultrafiltration (PUF) analysis of ligand-macromolecule interactions and PUF-electrospray mass spectrometry (ESMS) for screening molecular diversity. Great Lakes Chapter-American Society of Pharmacology and Experimental Therapeutics (ASPET) 10th Annual Scientific Meeting. Chicago, IL. June 3, 1997.

Zhao Y-Z, Nikolic D, Woodbury CP, van Breemen RB, Venton DL. Pulsed ultrafiltration-electrospray mass spectrometry: A new method for screening solution-phase combinatorial libraries. 214th American Chemical Society National Meeting. Las Vegas, NV; September 7-11, 1997.

Bolton JL, Shen L, Qiu S, Chen Y, Zhang F, van Breemen RB. Reaction of 4-hydroxyequilenin semi-quinone radical with 2'-deoxynucleosides: Potential carcinogenic mechanism for Premarin estrogens. 214th American Chemical Society National Meeting. Las Vegas, NV; September 7-11, 1997.

Shen L, Qiu S, van Breemen RB, Zhang F, Chan Y, Bolton JL. Potential carcinogenic mechanism of Premarin from the reaction of 4-hydroxyequilenin semi-quinone radical with 2'-deoxynucleosides. Sixth Annual Functional Foods Retreat, Functional Foods for Health. Chicago, IL; October 3-4, 1997.

Bolton JL, Shen L, Huang Z, van Breemen RB. Competing mechanisms for estrogen toxicity: Aromatization of the B-ring in 4-hydroxyequilenin markedly alters quinoid formation of reactivity. Society of Toxicology Annual Meeting. Cincinnati, OH; November 5-8, 1997.

Venton DL, van Breemen RB, Woodbury CP, Zhao Y-Z, Nikolic D. Screening solution-phase combinatorial libraries using pulsed ultrafiltration/electrospray mass spectrometry. 1998 Pittsburgh Conference. New Orleans, LA; March 1-6, 1998.

Chan Y, Shen L, Zhang F, van Breemen RB, Nikolic D, Lau S, Bolton JL. Oxidation of DNA by the Premarin metabolite 4-hydroxyequilenin: Role in estrogen carcinogenesis? Society of Toxicology Annual Meeting. Seattle, WA; April 14-17, 1998.

Shen L, Qiu S, Chan Y, Zhang F, van Breemen RB, Nikolic D, Bolton JL. Alkylation of 2'-deoxynucleotides and DNA by the semiquinone radical of 4-hydroxyequilenin: potential carcinogenic

mechanism for Premarin estrogens. Society of Toxicology Annual Meeting. Seattle, WA; April 14-17, 1998.

van Breemen RB, Powers DD, Carbonell RG, Kilpatrick PK. Role of surface activity in ionization mechanisms of electrospray and FAB mass spectrometry. 46th ASMS Conference on Mass Spectrometry & Allied Topics. Orlando, FL, May 31- June 4, 1998.

van Breemen RB, Nikolic D, Fan PW, Bolton JL. Metabolic screening using on-line ultrafiltration mass spectrometry. 46th ASMS Conference on Mass Spectrometry & Allied Topics. Orlando, FL, May 31- June 4, 1998.

Xiong HY, Xu X, Catana F, van Breemen RB. Measurement of DNA oxidation products using reversed phase HPLC-electrospray tandem mass spectrometry. 46th ASMS Conference on Mass Spectrometry & Allied Topics. Orlando, FL, May 31- June 4, 1998.

Corley DG, Habibi-Goudarzi S, Duffin KL, Wideman MA, van Breemen RB. Pulsed ultrafiltration mass spectrometry: A new technique for the discovery of bioactive natural products. 21st IUPAC International Symposium on the Chemistry of Natural Products. Beijing, China; October 11-16, 1998.

Constantinou A, Xu X, Wang Y, Bowen P, van Breemen RB. Chemoprevention of prostate cancer by lycopene and its metabolites. Analytical and mechanistic studies. International Conference on Diet and Prevention of Cancer. Tampere, Finland. May 28-June 2, 1999.

Xu X, Wang Y, van Lieshout M, West C, Lugtenburg J, van Breemen RB. Measurement of ^{13}C -labeled retinol for studying β -carotene bioavailability and its bioconversion to retinol using APCI-LC-MS. 8th Annual Functional Foods for Health Retreat. Bloomingdale, IL; May 17-19, 1999.

van Breemen RB, Nikolic D, Fan PW, Bolton JL. Screening for xenobiotic electrophilic metabolites using pulsed ultrafiltration mass spectrometry. 47th ASMS Conference on Mass Spectrometry and Allied Topics. Dallas, TX; June 13-17, 1999.

Xu X, Wang Y, van Lieshout M, West CE, Lugtenburg J, van Breemen RB. Measurement of ^{13}C -labeled retinol for studying β -carotene bioavailability and its bioconversion to retinol using APCI-LC-MS. 47th ASMS Conference on Mass Spectrometry and Allied Topics. Dallas, TX; June 13-17, 1999.

Nikolic D, Corley DG, Habibi-Goudarzi S, Gafner S, van Breemen RB. Screening for inhibitors of cyclooxygenase-2 using pulsed ultrafiltration mass spectrometry. 47th ASMS Conference on Mass Spectrometry and Allied Topics. Dallas, TX; June 13-17, 1999.

Wang Y, Xu X, van Lieshout M, West CE, Schilling AB, Lugtenburg J, van Breemen RB. Quantitation of β -carotene in human serum using LC-MS with APCI. 47th ASMS Conference on Mass Spectrometry and Allied Topics. Dallas, TX; June 13-17, 1999.

Shen L, Wainhaus S, Xu X, Wang Y, van Breemen RB. Application of LC-MS-MS to the quantitation of DNA oxidation products in human cells and tissue. 47th ASMS Conference on Mass Spectrometry and Allied Topics. Dallas, TX; June 13-17, 1999.

Wainhaus SB, Shen L, Xiong Y, Xu X, van Breemen RB. Quantitative analysis of DNA oxidation products using negative ion electrospray LC-MS-MS. 47th ASMS Conference on Mass Spectrometry and Allied Topics. Dallas, TX; June 13-17, 1999.

van Breemen RB, Wang Y, Xu X, Lugtenburg J, van Lieshout M, West CE. Development of an LC-APCI-MS method to measure ^{13}C -labeled and unlabeled retinol and β -carotene in human plasma for bioavailability investigations. 12th International Carotenoid Symposium. Cairns, Australia; July 18-23, 1999.

van Breemen RB, Xu X, Wang Y, Constantinou AI, Bowen PE. Solubilization, stabilization and delivery of carotenoids to tissue culture using micelles: investigation of the antiproliferative effect of lycopene on human prostate tumor cells. 12th International Carotenoid Symposium. Cairns, Australia; July 18-23, 1999.

Bowen PE, Chen L, Duncan C, Stacewicz-Sapuntzakis M, Ghosh L, van Breemen RB, Sharifi R. Effect of dietary tomato sauce on lycopene accumulation in human prostate. 12th International Carotenoid Symposium. Cairns, Australia; July 18-23, 1999.

van Lieshout, M.; West, C. E.; Wang, Y.; Xu, X.; van Breemen, R. B.; Permaesih, D.; Muhilal; Verhoeven, M.; Creemers, A.; Lugtenburg, J. Quantification of bioavailability of β -carotene and its bioconversion to retinol using [¹³C]- β -carotene and [¹³C]-retinyl palmitate. 12th International Carotenoid Symposium. Cairns, Australia; July 18-23, 1999.

Li W, Gu C, Zhang H, Fong HHS, van Breemen RB, Fitzloff J. Identification of Asian ginseng (*Panax ginseng*) and american ginseng (*Panax quinquefolius*) Using High Performance Liquid Chromatography Tandem Mass Spectrometry. 48th ASMS Conference on Mass Spectrometry and Allied Topics. Long Beach, CA; June 11-15, 2000.

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- Simmler C, Nikolic D, van Breemen RB, Lankin DC, Chen S-N, Pauli GF. Comparative metabolomics fractionation and characterization of licorice roots. 53rd Annual Meeting of the American Society of Pharmacognosy. New York, NY. July 28-August 1, 2012.
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- van Breemen RB, Huang K. UHPLC-MS-MS with precursor ion scanning, neutral loss scanning and polarity switching for the detection of glutathione conjugates of reactive metabolites. 19th International Mass Spectrometry Conference. Kyoto, Japan. September 15-21, 2012.
- Hajirahimkhan A, Dietz BM, Dong H, Simmler C, Chen S-N, Nikolic D, Pauli GF, van Breemen RB, Bolton JL. Comparison of the chemopreventive potential of two licorice species with hops. 5th Great Lakes Nuclear Receptor Conference. Northwestern University, Chicago, IL. October 12-13, 2012.
- Pezzuto JM, Park E-J, Ogas T, Kondratyuk T, Grubbs C, Cushman M, van Breemen RB. Biological evaluation of resveratrol and derivatives. Resveratrol 2012 2nd International Conference of Resveratrol and Health. Leicester, United Kingdom. December 5-7, 2012.
- Hu WY, Shi GB, Hu DP, Martinez E, van Breemen RB, Kajdacsy-Balla A, Prins GS. Developmental exposure to low-dose BPA increases in vivo carcinogenic susceptibility of human prostate epithelium. Endocrine Society Annual Meeting. San Francisco, CA. June 12-16, 2013.
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- Li Y, Dahl JH, White J, van Breemen RB. Quantitation of 8-iso-PGF_{2 α} in human urine using UHPLC-MS-MS. 61st Annual Conference on Mass Spectrometry and Allied Topics. Minneapolis, MN. June 9-13, 2013.
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- Dong SH, Cai G, Napolitano JG, Nikolic D, Lankin DC, McAlpine JB, van Breemen RB, Soejarto DD, Qiu F, Simmler C, Pauli CF, Chen SN. Metabolomic mining of the botanical dietary supplement wild yam (*Dioscorea villosa* L.). 54th Annual Meeting of the American Society of Pharmacognosy. St. Louis, MO. July 13-17, 2013.
- van Breemen RB, Huang K, Li G, Yuan Y, Hauck Z. Quantitative analysis of bisphenol A and bisphenol A-glucuronide in serum using UHPLC-MS/MS. 6th Annual Conference & Exhibits of the Association for Mass Spectrometry Applications to the Clinical Lab. San Diego, CA. March 1-5, 2014.
- Hauck Z, Li G, Huang K, van Breemen RB. A validated bioanalytical method for the determination of BPA-glucuronide concentrations in human urine using UHPLC-MS. 6th Annual Conference & Exhibits of the Association for Mass Spectrometry Applications to the Clinical Lab. San Diego, CA. March 1-5, 2014.
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- Chung B, Rueter EE, Cotler S, Jensen D, Guzman G, van Breemen R, Gann P. Retinoid/carotenoid depletion in hepatitis C: Fibrosis stage in relation to serum biomarkers for antioxidant status, insulin resistance and oxidative stress. United States & Canadian Academy of Pathology 103rd Annual Meeting, San Diego, CA. March 1-7, 2014.
- Burton T, Anderson JR, Simmler C, Chen S-N, Pauli GF, Soejarto DD, Dong H, Li G, Bolton J, van Breemen RB. Pharmacognostic studies of botanicals used by Native Americans for the benefit of women's health. 2014 Joint Conference for the Society for Economic Botany and the Society of Ethnobiology. Cherokee, NC. May 11-14, 2014.
- Nikolić D, Cisowska T, Lankin DC, Chen S-N, Pauli GF, van Breemen RB. Further characterization of the nitrogenous metabolome of black cohosh (*Actaea racemosa*). 62nd Annual Conference on Mass Spectrometry and Allied Topics. Baltimore, MD. June 15-19, 2014.

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Huang L, Huang K, van Breemen. Fast detection of reactive metabolites trapped as GSH conjugates using polarity switching and UHPLC on a triple quadrupole mass spectrometer. 62nd Annual Conference on Mass Spectrometry and Allied Topics. Baltimore, MD. June 15-19, 2014.

Feinstein DL, Weinberg G, Rubinstein I, Brodsky S, Akpa BS, van Breemen R. Lipid emulsion as countermeasure against brodifacoum poisoning. 8th Annual CounterACT Network Research Symposium. Denver, CO. June 17-19, 2014.

Calderon-Gierzal EL, Kajdacsy-Balla A, Li G, van Breemen RB, Prins GS. Direct differentiation of human embryonic stem cells (hESC) to prostate: Novel models that verify bisphenol A effects on human prostate development. 96th Annual Meeting of the Endocrine Society. Chicago, IL. June 21-24, 2014.

Gauthier L, Simmler C, McAlpine J, Nikolic D, van Breemen RB, Chen S-N, Pauli GF, Friesen JB. Targeted purification of glabridin and congeneric metabolites from *Glycyrrhiza glabra* L. using a phase metering apparatus. (presented by J McAlpine) 8th International Conference on Countercurrent Chromatography. July 14, 2014. London, UK.

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Dunlap TL, Wang S, Raffaelli FM, Chen S-N, Simmler C, Pauli GF, van Breemen RB, Dietz BM, Bolton JL. Botanicals used for women's health modulate inflammatory-driven estrogen carcinogenesis in MCF-10A cells. 248th ACS National Meeting and Exposition. San Francisco, CA. August 10-14, 2014.

Hajirahimkhan A, Simmler C, Dong H, Lantvit D, Huang K, Chen S-N, Nikolic D, Dietz BM, Pauli GF, van Breemen RB, Bolton JL. Induction of the detoxification enzyme NAD(P)H:quinone oxidoreductase 1 (NQO1) by licorice species used in botanical dietary

supplements for women's health. 248th ACS National Meeting and Exposition. San Francisco, CA. August 10-14, 2014.

Li G, Huang K, Nikolić D, van Breemen RB. An in vitro high-throughput CYP cocktail inhibition assay using UHPLC-MS/MS. 19th North American ISSX Meeting and 29th JSSX Annual Meeting. San Francisco, CA. October 19-23, 2014.

Huang L, Nikolic D, van Breemen RB. Hepatic metabolism of licochalcone A, a chalcone from licorice (*Glycyrrhiza inflata*). Mass Spectrometry: Applications to the Clinical Lab (MSACL) 2015 US. San Diego, CA. March 28-April 1, 2014.

Rush M, Walker E, van Breemen RB. High throughput screening of natural products utilizing pulsed ultrafiltration or Mmass with UHPLC-MS/MS. 63rd Conference on Mass Spectrometry and Allied Topics. St. Louis, MO. May 31-June 4, 2015.

Hauck Z, Feinstein DL, van Breemen RB. A validated bioanalytical method for the measurement of the anticoagulant brodifacoum and vitamin K in rat tissues using UHPLC-MS/MS. 63rd Conference on Mass Spectrometry and Allied Topics. St. Louis, MO. May 31-June 4, 2015.

Walker EM, Rush MD, van Breemen RB. High-throughput MS-based magnetic microbead affinity selection screening (Mmass) for ligands to the retinoid-X receptor (RXR). 63rd Conference on Mass Spectrometry and Allied Topics. St. Louis, MO. May 31-June 4, 2015.

Nikolic D, van Breemen RB. Collision-induced dissociation of *N*-acyl dopamines: observation of unusual loss of ammonia. 63rd Conference on Mass Spectrometry and Allied Topics. St. Louis, MO. May 31-June 4, 2015.

Sprouse AA, van Breemen RB. Pharmacokinetic interactions between drugs and botanical dietary supplements. American Society of Pharmacognosy 2015 Annual Meeting. Copper Mountain, CO. July 25-29, 2015.

Dietz BM, Dunlap TL, Hajirahimkhan A, Wang S, Dong H, Simmler C, Phansalkar R, Ramos Alvaregna RF, Chen S-N, Nikolic D, van Breemen, Pauli GF, Bolton JL. Can women's health botanicals prevent estrogen carcinogenesis? American Society of Pharmacognosy 2015 Annual Meeting. Copper Mountain, CO. July 25-29, 2015.

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Li G, Nikolic D, van Breemen RB. High-throughput cytochrome P450 inhibition cocktail assay for evaluating possible drug-botanical interactions: application to licorice. American Society of Pharmacognosy 2015 Annual Meeting. Copper Mountain, CO. July 25-29, 2015.

Nosal DG, Burton T, Wright B, Li Y, van Breemen RB. Quantification of polyphenols in freeze-dried table grape powder. American Society of Pharmacognosy 2015 Annual Meeting. Copper Mountain, CO. July 25-29, 2015.

Gauthier LL, Simmler C, van Breemen RB, Chen S-N, Pauli GF, Friesen JB. A designer licorice extract: selective depletion of glabridin and congeneric metabolites by countercurrent separation. American Society of Pharmacognosy 2015 Annual Meeting. Copper Mountain, CO. July 25-29, 2015.

Burton T, Dunlap T, Dong H, Li G, Bolton J, Soejarto D, van Breemen RB. American Indian botanicals: possible alternatives to hormone therapy during menopause. American Society of Pharmacognosy 2015 Annual Meeting. Copper Mountain, CO. July 25-29, 2015.

van Breemen RB. Development of safe and effective botanical dietary supplements. American Society of Pharmacognosy 2015 Annual Meeting. Copper Mountain, CO. July 25-29, 2015.

Burton T, Dunlap T, Dong H, Li G, Bolton J, Soejarto D, van Breemen RB. American Indian botanicals as possible alternatives to hormone therapy. 54th Meeting of the Phytochemical Society of North America. Urbana-Champaign, IL. August 8-12, 2015.

Rush M, Walker E, van Breemen RB. High-throughput MS-based magnetic microbead affinity selection screening (MagMASS) for ligands to the retinoid-X receptor (RXR). University of Illinois Cancer Research Forum. October 20, 2015.

van Breemen RB. Identification of active compounds and chemical standardization of botanical dietary supplements. Mass Spectrometry Applications to the Clinical Lab (MSACL) 2015 EU. Salzburg, Austria. September 8-11, 2015.

van Breemen RB, Sprouse A, Li G, Nikolic D. The role of UHPLC-MS/MS in preclinical and clinical studies of drug interactions with botanical dietary supplements. Mass Spectrometry Applications to the Clinical Lab (MSACL) 2016 US. Palm Springs, CA. February 21-25, 2016.

Rush M, van Breemen RB. Role of ammonium salts in the ionization and fragmentation of phosphatidylcholines found in krill oil. 64th ASMS Conference on Mass Spectrometry and Allied Topics. San Antonio, TX. June 5-9, 2016.

Nikolic D, Lankin DC, van Breemen RB. Collision-induced dissociation MS/MS of cimitrypazepines, a new class of alkaloids from black cohosh (*Actaea racemosa*). 64th ASMS Conference on Mass Spectrometry and Allied Topics. San Antonio, TX. June 5-9, 2016.

Huang L, Nikolic D, van Breemen RB. In vitro hepatic metabolism of licochalcone A, a chalcone from the licorice species *Glycyrrhiza inflata*. 64th ASMS Conference on Mass Spectrometry and Allied Topics. San Antonio, TX. June 5-9, 2016.

Hauck Z, Feinstein DL, van Breemen RB. Absorption, distribution and metabolism of brodifacoum, a potent anticoagulant rodenticide. 64th ASMS Conference on Mass Spectrometry and Allied Topics. San Antonio, TX. June 5-9, 2016.

Newsome AG, Chen L, Culver CA, van Breemen RB. Isolation, characterization and color stability of natural blue pigments. 64th ASMS Conference on Mass Spectrometry and Allied Topics. San Antonio, TX. June 5-9, 2016.

Li G, Simmler C, Nikolic D, Chen S-N, Pauli GF, van Breemen RB. Authentication and chemical standardization of licorice dietary supplements using UHPLC-MS/MS. 64th ASMS Conference on Mass Spectrometry and Allied Topics. San Antonio, TX. June 5-9, 2016.

Muchiri R, Rush M, Walker E, van Breemen RB. Application of magnetic microbead affinity selection screening (MagMASS) towards discovery of retinoid X receptor- α ligands. 64th ASMS Conference on Mass Spectrometry and Allied Topics. San Antonio, TX. June 5-9, 2016.

Burton T, Muchiri R, Rush M, Dunlap T, Dong H, Li G, Simmler C, Bolton J, Soejarto D, van Breemen RB. Investigation of an American Indian herb, *Amorpha canescens* Pursh, for menopause and other women's health ailments. 55th Annual Meeting of the Phytochemical Society of North America. Davis, CA. August 6-10, 2016.

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van Breemen RB, Sprouse A, Huang K, Li G. Studies of pharmacokinetic interactions between drugs and botanical dietary supplements used by menopausal women. 55th Annual Meeting of the Phytochemical Society of North America. Davis, CA. August 6-10, 2016.

Li G, Dejan Nikolić D, van Breemen RB. Simultaneous chemical standardization and botanical authentication of botanical dietary supplements using UHPLC-MS/MS. 130th Annual Meeting & Exposition of AOAC International. Dallas, TX. September 18-21, 2016.

Keiler AM, Macejova D, Dietz BM, Bolton JL, Pauli GF, Chen S-N, van Breemen RB, Nikolic D, Goerl F, Muders MH, Zierau O, Vollmer G. Safety evaluation of estrogenic potency of an 8-prenylnaringenin enriched hop extract regarding mammary gland of young adult female Wistar rats and MNU-induced mammary tumor growth in Sprague-Dawley rats. Society of Toxicology 56th Annual Meeting and ToxExpo. Baltimore, MD. March 12-16, 2017.

Tonsing-Carter AA, van Breemen RB. In vitro assessment of drug interaction potential of licorice extracts. American Society for Pharmacology and Experimental Therapeutics, Experimental Biology 2017. Chicago, IL. April 22-26, 2017.

Chen L, Tonsing-Carter A, van Breemen RB. Clinical evaluation of hop-drug interactions using probe substrates of cytochrome P450 enzymes and a hop dietary supplement. American Society for Pharmacology and Experimental Therapeutics, Experimental Biology 2017. Chicago, IL. April 22-26, 2017.

Huang L, Nikolic D, van Breemen RB. Hepatic metabolism of licochalcone A, a chalcone from the licorice species *Glycyrrhiza inflata*. American Society for Pharmacology and Experimental Therapeutics, Experimental Biology 2017. Chicago, IL. April 22-26, 2017.

Muchiri R, Rush M, Walker E, van Breemen RB. Development and application of magnetic microbead affinity selection screening (MagMASS) for novel retinoid X receptor- α (RXR α) anti-inflammatory agents. 65th ASMS Conference on Mass Spectrometry and Allied Topics. Indianapolis, IN. June 4-8, 2017.

Nosal D, Rush MD, Burton T, van Breemen RB. Development of a magnetic microbead affinity selection screening (MagMASS) UHPLC-MS assay for the progesterone receptor. 65th ASMS Conference on Mass Spectrometry and Allied Topics. Indianapolis, IN. June 4-8, 2017.

Chen L, Tonsing-Carter A, van Breemen RB. Evaluation of interaction of hop botanical dietary supplements with drug metabolism in women. 65th ASMS Conference on Mass Spectrometry and Allied Topics. Indianapolis, IN. June 4-8, 2017.

Wong A, Huang L, Wang S, Howell C, Bolton JL, van Breemen RB. UHPLC-MS/MS quantitative analysis of estrogen metabolites in human serum. 65th ASMS Conference on Mass Spectrometry and Allied Topics. Indianapolis, IN. June 4-8, 2017.

- Rue EA, van Breemen RB. Ion mobility mass spectrometry as a rapid approach for the separation and analysis of procyanidins in botanicals. 65th ASMS Conference on Mass Spectrometry and Allied Topics. Indianapolis, IN. June 4-8, 2017.
- Rush MD, Murphy BT, van Breemen RB. MagMASS as a drug discovery platform – screening Actinobacteria for novel ligands of fructose-1,6-bisphosphatase. 65th ASMS Conference on Mass Spectrometry and Allied Topics. Indianapolis, IN. June 4-8, 2017.
- Huang L, Lee AE, Simmler C, Yu Y, Chen S-N, Pauli GF, van Breemen RB. MS-based screening of licorice extracts for chemoprevention agents that covalently modify Keap1 protein, a regulator of the antioxidant response element. 65th ASMS Conference on Mass Spectrometry and Allied Topics. Indianapolis, IN. June 4-8, 2017.
- Lee A, Huang L, van Breemen RB. Defining mechanisms of licorice chemoprevention: identification of active sites on Keap1 and Bach1 regulating the antioxidant response element. 65th ASMS Conference on Mass Spectrometry and Allied Topics. Indianapolis, IN. June 4-8, 2017.
- Rue EA, Glinski JA, van Breemen RB. Procyanidins: identification and analysis using ion mobility mass spectrometry. 58th Annual Meeting of the American Society of Pharmacognosy. Portland, OR. July 29-August 2, 2017.
- Tonsing-Carter A, Li G, Lee AE, Lopez BR, van Breemen RB. In vitro assessment of drug interaction potential of licorice extracts. 58th Annual Meeting of the American Society of Pharmacognosy. Portland, OR. July 29-August 2, 2017.
- Burton T, Muchiri R, Rush M, Dunlap T, Dong H, Li G, Lankin D, Nikolic D, Simmler C, Dietz B, Bolton J, Soejarto D, van Breemen RB. Investigation of an American Indian herb, *Amorpha canescens* Pursh., for improving women's health. 58th Annual Meeting of the American Society of Pharmacognosy. Portland, OR. July 29-August 2, 2017.
- Chen L, Tonsing-Carter A, van Breemen RB. Evaluation of interaction of hop botanical dietary supplements with drug metabolism in women. 58th Annual Meeting of the American Society of Pharmacognosy. Portland, OR. July 29-August 2, 2017.
- Simmler C, Mbachu O, Nikolic DC, van Breemen RB, Bolton JL, Pauli GF. Identity and purity verification of commercial compounds is essential for the accuracy of biological results. 58th Annual Meeting of the American Society of Pharmacognosy. Portland, OR. July 29-August 2, 2017.
- Dietz BM, Wang S, Dunlap TL, Huang L, Liu Y, Simmler C, Lantvit D, Dong H, Chen S-N, Pauli GF, van Breemen RB, Dietz BM, Bolton JL. The licorice species, *Glycyrrhiza inflata*, shows chemopreventive potential by downregulation of oxidative estrogen metabolism. 58th Annual Meeting of the American Society of Pharmacognosy. Portland, OR. July 29-August 2, 2017.
- Yu Y, Huang L, Gan L-S, Lankin DC, McAlpine JB, van Breemen RB, Li D, Pauli GF, Chen S-N. Mining of strongly deshielded hydroxyls enables metabolomics standardization of botanicals. 58th Annual Meeting of the American Society of Pharmacognosy. Portland, OR. July 29-August 2, 2017.
- Nosal DG, Rush MD, van Breemen RB. Development of magnetic microbead affinity selection screening (MagMASS) UHPLC-MS assay for the progesterone receptor. 58th Annual Meeting of the American Society of Pharmacognosy. Portland, OR. July 29-August 2, 2017.
- Tyler L, Tonsing-Carter A, van Breemen RB, Chen S-N, Pauli G. 58th Annual Meeting of the American Society of Pharmacognosy. Portland, OR. July 29-August 2, 2017. NMR quantitation and

Caco-2 model permeability screening of a botanical marker in a survey of *Glycyrrhiza* extracts. 58th Annual Meeting of the American Society of Pharmacognosy. Portland, OR. July 29-August 2, 2017.

Muchiri R, Huang K, Gauthier L, Lankin DC, Pauli GF, van Breemen RB. Inhibition of cytochrome P450 3A4 (CYP3A4) by a licorice extract. 58th Annual Meeting of the American Society of Pharmacognosy. Portland, OR. July 29-August 2, 2017.

van Breemen RB. Pharmacokinetic Interactions between drugs and hop botanical dietary supplements used by menopausal women. Mass Spectrometry Applications to the Clinical Lab (MSACL) 2018 US. Palm Springs, CA. January 21-25, 2018.

Muchiri R, Kowal K, Hensley K, Feinstein D, van Breemen R. UHPLC-MS/MS analysis of lanthionine ketimine ethyl ester in mouse serum and tissues. 66th ASMS Conference on Mass Spectrometry and Allied Topics. San Diego, CA. June 3-7, 2018.

Chen L, Tonsing-Carter A, Banuvar S, van Breemen R. Clinical evaluation of drug interactions with hop botanical dietary supplements in women. 66th ASMS Conference on Mass Spectrometry and Allied Topics. San Diego, CA. June 3-7, 2018.

Nosal DG, Chen L, Zhang G, Shen S, Kozikowski AP, van Breemen RB. LC-MS/MS metabolite identification and characterization of a novel (2-phenylcyclopropyl)methylamine serotonin 2C agonist using human and mouse liver microsomes. 66th ASMS Conference on Mass Spectrometry and Allied Topics. San Diego, CA. June 3-7, 2018.

Muchiri R, Rush M, Walker E, and Breemen RB. Development and application of magnetic microbead affinity selection screening for novel retinoid X receptor- α anti-inflammatory agents. 59th Annual Meeting of the American Society of Pharmacognosy. Lexington, KY. July 21-24, 2018.

Tang Y, Zhou B, Phansalkar RS, Nikolic D, van Breemen RB, McAlpine JB, Lankin DC, Bisson J, Pauli GF, Chen S-N. Preparative metabolomics to probe structural diversity of *Rhodiola rosea* by combined CPC, UHPLC, LC-MS, and NMR. 59th Annual Meeting of the American Society of Pharmacognosy. Lexington, KY. July 21-24, 2018.

van Breemen RB. Advances in high-throughput affinity extraction mass spectrometry for characterizing active compounds in natural product mixtures. 59th Annual Meeting of the American Society of Pharmacognosy. Lexington, KY. July 21-24, 2018.

Chen L, Tonsing-Carter A, Banuvar S, Barengolts, Viana M, van Breemen RB. Clinical evaluation of interaction of a hop botanical dietary supplement with drug metabolism in women. 59th Annual Meeting of the American Society of Pharmacognosy. Lexington, KY. July 21-24, 2018.

Nosal DG, Feinstein DL, van Breemen RB. Quantification of superwarfarin rodenticides in plasma using high-performance liquid chromatography tandem mass spectrometry. MSACL 2019 US 11th Annual Conference & Exhibits. Palm Springs, CA. April 2-4, 2019.

Chen L, Choi J, Leonard S, Tonsing-Carter A, Banuvar S, Barengolts E, Viana M, van Breemen RB. Clinical evaluation of interaction of phytoestrogenic botanical dietary supplements with drug metabolism in women MSACL 2019 US 11th Annual Conference & Exhibits. Palm Springs, CA. April 2-4, 2019.

Wong A, van Breemen RB. Hormone modulations of 4-hydroxyestradiol, 5 α -androstane-3 α ,17 β -diol, and glucocorticoids observed in urine of post- and peri- menopausal women taking a hop botanical dietary supplement. MSACL 2019 US 11th Annual Conference & Exhibits. Palm Springs, CA. April 2-4, 2019.

- Choi J, Chen L, Leonard SW, Banuvar S, Barengolts E, Viana M, van Breemen RB. Pharmacokinetic interactions of a red clover botanical dietary supplement with drug metabolism in peri- and post-menopausal women. 67th ASMS Conference on Mass Spectrometry and Allied Topics. Atlanta, GA. June 2-6, 2019.
- Chen L, Tyler L, Nikolic D, Pauli GF, van Breemen RB. Cytochrome P450 inhibition by licorice *Glycyrrhiza uralensis* Fish. ex DC. 67th ASMS Conference on Mass Spectrometry and Allied Topics. Atlanta, GA. June 2-6, 2019.
- Muchiri RN, Choi J, Carter KA, Tyler B, van Breemen RB. Automation and application of magnetic based affinity selection screening for targets of retinoid X receptor- α (RXR α). 67th ASMS Conference on Mass Spectrometry and Allied Topics. Atlanta, GA. June 2-6, 2019.
- Nosal DG, van Breemen RB. Quantification of superwarfarin rodenticides in plasma using high-performance liquid chromatography-tandem mass spectrometry. 67th ASMS Conference on Mass Spectrometry and Allied Topics. Atlanta, GA. June 2-6, 2019.
- Wong A. van Breemen RB. Urinary Estrogen Derivatization and High-Resolution LC-MS Analysis to determine modulation of estrogen metabolism in women resulting from use of botanical dietary supplements. 12th International ISSX Meeting. Portland, OR. July 28-31, 2019.
- Chen L, Choi J, Leonard S, Banuvar S, Barengolts E, Viana M, Dietz B, Bolton J, Chen S-N, van Breemen RB. Clinical evaluation of red clover-drug interactions using probe substrates of cytochrome P450 enzymes and a red clover dietary supplement. 10th Linus Pauling Institute International Conference. Corvallis, OR. August 14-16, 2019.
- Liu J, van Breemen RB, Chen S-N, Pauli GF. Absorption and metabolism of irilone in the Caco-2 cell model. 10th Linus Pauling Institute International Conference. Corvallis, OR. August 14-16, 2019.
- Muchiri R, Choi J, Carter K, Tyler B, van Breemen RB. Automation and application of magnetic based affinity selection screening for targets of retinoid X receptor- α . 10th Linus Pauling Institute International Conference. Corvallis, OR. August 14-16, 2019.
- Nosal D, van Breemen RB. Quantification of superwarfarin rodenticides in plasma using high-performance liquid chromatography-tandem mass spectrometry. 10th Linus Pauling Institute International Conference. Corvallis, OR. August 14-16, 2019.
- Rue E, Glinski J, van Breemen RB. Isomeric identification of procyanidins using ultrahigh pressure liquid chromatography-tandem mass spectrometry. 10th Linus Pauling Institute International Conference. Corvallis, OR. August 14-16, 2019.
- Wong A. van Breemen RB. Urinary estrogen derivatization and high-resolution LC-MS analysis to determine modulation of estrogen metabolism in women resulting from use of botanical dietary supplements. 10th Linus Pauling Institute International Conference. Corvallis, OR. August 14-16, 2019.
- Muchiri RN, van Breemen RB. Single laboratory validation of UHPLC-MS/MS assay of red clover. AOAC International 133rd Annual Meeting & Exposition. Denver, CO. September 6-12, 2019.
- van Breemen RB, Muchiri RN, Choi J, Gibbon DM, Tyler B. Advancing the throughput and sensitivity of magnetic microbead affinity selection-mass spectrometry (MagMASS) for natural products drug discovery. 68th ASMS Conference on Mass Spectrometry and Allied Topics. On-line. June 1-12, 2020.

Nosal DG, Feinstein DL, van Breemen RB. High resolution UHPLC-MS/MS identification and characterization of superwarfarin metabolites in human blood. 68th ASMS Conference on Mass Spectrometry and Allied Topics. On-line. June 1-12, 2020.

Chen L, Tyler L, Nikolic D, Li G, Pauli GF, van Breemen RB. Inhibitory mechanism and kinetics of active components of licorice *Glycyrrhiza uralensis* Fisch. ex DC. on human cytochrome P450 enzymes. 68th ASMS Conference on Mass Spectrometry and Allied Topics. On-line. June 1-12, 2020.

CONSULTING (Selected since 2006)

California Table Grape Commission (since 2006)

Glenmark Pharmaceuticals

Hershey Company

Metagenics, Inc.

Naturex (current)

Perrigo Company

PepsiCo

United States Federal Trade Commission (current)

EXPERT WITNESS TESTIMONY

- Civil Action No. 98-583; *Scriptgen Pharmaceuticals, Inc. v. 3-Dimensional Pharmaceuticals, Inc.* United States District Court, District of Delaware
- Civil Action No. 99-13; *Minnesota Mining & Manufacturing Co. and Riker Labs., Inc. v. Alphapharm, Ltd.* United States District Court, District of Minnesota
- Civil Action No. 04-1244; *Forest Labs. v. Alphapharm Pty., Ltd.*
- Civil Action No. 07-CV-01334; *Schering Corp. et al. v. Glenmark Pharmaceuticals* (2007-2009)
- Civil Action No. 07-CV-3397; *Rexall Sundown, Inc. v. Perrigo Co.* (2008-2010) United States District Court, Eastern District of New York
- Civil Action No. 09-CV-3587; *King Pharmaceuticals Inc. et al. v. Sandoz Inc.* (2010-2011)
- United States International Trade Commission Investigation No. 337-TA-877 (2013-2014) Washington, DC
- Civil Action No. 1:04-CV-3294-CAP; *Federal Trade Commission v. National Urological Group, Inc.* (2016-2017) United States District Court, Northern District of Georgia Atlanta Division

- Civil Action No. 18-1450-MN; *Waters Corporation and Waters Technologies Corporation, v. Agilent Technologies, Inc.* United States District Court, District of Delaware

EXTERNAL RESEARCH SUPPORT

Richard B. van Breemen

**Linus Pauling Institute
Department of Pharmaceutical Sciences, College of Pharmacy
Oregon State University**

1. Completed Research Support

North Carolina Biotechnology Center 01-24-86 to 01-23-89
"Development of a mass spectrometry laboratory \$600,000
for biotechnology research"
Co-P.I. (Sims, L.B. and Armstrong, F.B.)

NIH Biomedical Research Support Grant 04-01-86 to 03-31-87
BRSG No. RR7071 \$11,500
"Analysis of alkylated enzymes and proteins by HPLC and mass spectrometry"
Principal Investigator

North Carolina Biotechnology Center 05-01-86 to 04-30-87
"Development of analytical methods for analysis of \$22,570
covalent modifications of proteins"
Principal Investigator

Faculty Research & Professional Development Award 01-01-88 to 12-31-88
Grant No. 01042 \$3,500
"Analysis of substituted transition metal carbonyls by mass spectrometry"
Principal Investigator

North Carolina Biotechnology Center 06-01-88 to 05-31-89
"Immobilization of bacterial enzymes involved in \$18,026
the environmental degradation of organic chemical pollutants."
Principal Investigator

Physical and Mathematical Sciences Foundation 05-15-89 to 04-30-90
Dean's Fund \$1,500
"Degradation of pollutants using immobilized enzymes"
Principal Investigator

Petroleum Research Fund 06-01-89 to 07-31-91
ACS-PRF #21692-G7 \$18,000
"Oxygenation of petrochemicals by immobilized bacterial enzymes"
Principal Investigator

Glaxo, Inc. 02-01-90 to 01-31-91
"Use of immobilized proteases and liquid \$5,000
chromatography-mass spectrometry to identify hydrolysis products of peptide-analog drugs"

Principal Investigator

Glaxo, Inc. "Sites of protein-RNA crosslinking determined by liquid chromatography-mass spectrometry" Principal Investigator	04-01-92 to 03-31-93 \$2,500
ABB Transmission & Technology Institute "Analysis of transformer oil samples for paper degradation products" Principal Investigator	06-01-91 to 12-31-91 \$45,476
Southeast Dairy Foods Research Center "Supercritical fluid fractionation of dairy lipids: compositional and structural characterization of isolated triglycerides" Co-Investigator (P.I. Schwartz, S.J.)	06-01-91 to 05-31-93 \$96,520
United States Department of Agriculture "Analysis of carotenoids and retinoids by liquid chromatography-mass spectrometry" Co-Principal Investigator (co-P.I. Schwartz, S.J.)	08-01-92 to 07-31-94 \$60,193
National Science Foundation, BIR-9111391 "Acquisition of a data system for a liquid chromatograph-mass spectrometer" Principal Investigator	03-15-92 to 08-31-94 \$40,000
ISIS Pharmaceuticals "Identification and quantitation of antisense therapeutic agents in biological fluids" Principal Investigator	04-01-92 to 03-31-93 \$36,618
Genentech, Inc. "Hydrolysis of peptide and protein drugs using immobilized hepatic proteases" Principal Investigator	05-01-92 to 04-10-93 \$10,000
National Science Foundation BIR-9204042 "Quantifying adsorption of peptides at gas-liquid interfaces" Principal Investigator	12-15-92 to 11-30-95 \$210,000
Department of Health and Human Services H75/ATH598336-02 "Great Lakes fish as a source of maternal and fetal exposure to chlorinated hydrocarbons" Co-Investigator (P.I. Waller, D.)	09-30-94 to 09-29-95 \$263,467 (total)
National Institutes of Health/Northwestern University "Low-Fat High-Fiber Soy Rich Diet in	08-05-95 to 08-04-97 \$155,312 (direct costs), \$229,551 (total)

Premenopausal Women"

Co-Principal Investigator (co-P.I. Beecher, C.W.)

UIC Campus Research Board

12-15-95 to 12-31-96

F95-115

\$14,000

"Metabolism of antisense drugs: analysis using affinity LC/MS"

Principal Investigator

National Institutes of Health

07-01-96 to 06-30-97

1 S10RR010485

\$209,104

"Acquisition of an electrospray mass spectrometer"

Principal Investigator

National Science Foundation

05-01-96 to 04-30-98

BIR-9513204

\$90,000

"Acquisition of electrospray LC-MS and LC-MS-MS instrumentation"

Principal Investigator

Functional Foods for Health Program

11-01-96 to 04-30-97

University of Illinois

\$10,000

"Stable isotope-labeled nucleosides for LC-MS quantitation DNA oxidation products"

Co-Principal Investigator (co-P.I. Bowen, P.E.)

Pharmacia & Upjohn

10-1-96 to 12-31-96

"Screening combinatorial libraries and quantification of ligand-receptor interactions using pulsed ultrafiltration (PUF)/electrospray mass spectrometry"

Principal Investigator

Agilent/Hewlett-Packard Company

07-01-96 to 05-31-98

"Liquid chromatograph-electrospray mass spectrometer for screening molecular diversity"

\$217,550

Principal Investigator

UIC Campus Research Board

01-01-97 to 12-31-97

F96-104

\$9,000

"The role of carcinogenic estrogen *o*-quinones in DNA damage"

Co-investigator (P.I. Bolton, J.L.)

Hunt-Wesson

12-01-97 to 05-31-99

"Effect of tomato sauce on DNA oxidation in prostate" \$4,718 (direct RvB) \$5,898 (total RvB)

Co-Investigator (P.I. Bowen, P.E.)

UIC Campus Research Board

01-01-97 to 12-31-97

2-6-42225

\$9,000

"Development of LC-MS assay for DNA oxidation"

Co-Principal Investigator (co-P.I. Bolton, J.L.)

Pharmacia & Upjohn

06-15-97 to 06-14-98

"Determination of serum albumin binding of drugs

\$14,000

and screening for active metabolites in biological fluids”

Principal Investigator

Monsanto Company 12-01-97 to 11-30-98

“Screening for inhibitors of cyclooxygenase \$10,000

using pulsed ultrafiltration mass spectrometry”

Principal Investigator

Functional Foods for Health Program 12-1-97 to 11-30-98

University of Illinois \$10,000

“Mechanism of chemoprotection by dietary phenols”

Co-Principal Investigator (co-P.I. Bolton, J.L.)

National Institutes of Health 04-15-97 to 02-28-02

R01 CA70771 \$585,497 (direct) \$899,369 (total costs)

“Prevention of DNA Oxidation by Tocopherol and Carotenoids”

Principal Investigator

Hewlett-Packard Company 05-01-98 to 01-31-99

“Evaluation of pulsed ultrafiltration-mass spectrometry” \$180,000

Principal Investigator

National Institutes of Health 07-01-98 to 6-30-04

P01 CA48112 \$947,987 (direct) \$4,820,250 (total)

“Natural inhibitors of carcinogenesis” \$83,210 (direct, year 1; RvB) \$329,044 (total; RvB)

Core Leader (P.I. Pezzuto, J.M.)

Monsanto – Agracetus 09-09-98 to 11-15-98

“Analysis of *Salicornia bigelovii* Seed Oil and Meal” \$19,667

Co-Investigator (P.I. Fitzloff, J.)

National Cancer Institute 09-30-98 to 09-30-02

N01-CN-15017-44 (Workstatement 85) \$166,480 (direct) \$259,492 (total)

“Screening chemopreventive agents in the *N*-butyl-*N*-(4-hydroxybutyl)-nitrosamine [OH BBN] model of bladder carcinogenesis”

Co-Investigator (P.I. Pezzuto, J.M.)

National Cancer Institute 09-30-98 to 09-30-02

NCI Workstatement No. 83 \$266,385 (direct) \$413,696 (total) (\$24,100 RvB)

“Chemoprevention of induced mammary tumors in the rat by combination of chemopreventive agents”

Co-Investigator (P.I. Pezzuto, J.M.)

National Institutes of Health 9-30-98 to 9-29-01

NO1 CN85081-70 \$1,012,595 (direct) \$1,503,775 (total)

“Phase I single and multiple-dose safety and pharmacokinetic study of lycopene in men”

Co-Investigator (P.I. Gustin, D.)

Hewlett-Packard Company 09-23-99

“MS Engine and LC-MSD mass spectrometers for Screening” Principal Investigator	\$435,000
National Institutes of Health R24 CA83124 “Core mass spectrometry resource for cancer research” Principal Investigator	07-01-99 to 06-30-04 \$650,000 (direct) \$1,051,321 (total)
National Institutes of Health P50 AT000155-01 to -05 “Botanical dietary supplements for women’s health” Co-Director, Project Leader, Core Leader	09-01-99 to 07-31-04 \$5,127,273 (direct) \$7,945,707 (total)
National Institutes of Health R01 CA79870 “Carcinogenic metabolites formed from antiestrogens” Co-Investigator (P.I. Bolton, J.L.)	01-8-99 to 11-30-02 \$533,521 (direct) \$859,975 (total)
Monsanto Company “Analysis for 8-hydroxydeoxyguanosine In mouse and rat liver, kidney and lung” Principal Investigator	01-10-2000 to 05-31-2000 \$18,000 (direct)
National Cancer Institute N01-CM-87103 “Pharmacokinetic and toxicity studies for betulinic acid (NSC-113090)” Co-Investigator (P.I. Levine, B.)	05-08-00 to 01-14-03 \$331,991 (direct) \$482,937 (total)
National Cancer Institute N01-CN-05024-40, NCI Workstatement 79 “Chemoprevention screening employing a transgenic mouse model which yields prostate tumors in male mice and breast tumors in female mice” Co-Investigator (P.I. Pezzuto, J.M.)	09-30-00 to 09-29-02 \$155,155 (direct) \$240,956 (total)
National Foundation for Cancer Research “Lycopene modulation of prostate tissue DNA damage, cell death and proliferation in men with prostate cancer” Co-investigator (P.I. Bowen, P.E.)	10-01-00 to 09-30-03 \$253,338 (direct) \$291,339 (total costs)
National Cancer Institute N01-CN-05024-40 (Workstatement 73) “Screening of chemopreventive agents in the MNU-induced rat mammary tumor model” Co-Investigator (P.I. Pezzuto, J.M.)	09-30-00 to 09-29-02 \$112,726 (direct) \$175,064 (total)
National Institutes of Health 1 M01 RR13987 “General Clinical Research Center” Co-Investigator (P.I. Moss, G.S.);	12-1-00 to 11-30-05 \$9,176,703 (total)

This grant supported the General Clinical Research Center at UIC and Dr. van Breemen's R01-supported lycopene clinical trials.

ACS Corporation Associates Grants	08-29-01 to 08-30-01
ACS Symposium	\$2,000
“Analytical Tools for Combinatorial Chemistry”	
Principal Investigator (Co-Chair: Buko, A.)	
National Institutes of Health	04-01-01 to 03-31-02
1 S10 RR14686	\$276,050 (direct)
“Matrix-assisted Laser Desorption TOF Mass Spectrometer”	
Principal Investigator	
UIC Campus Research Board	07-01-01 to 06-30-03
“Synthesis and screening of serotonin antagonists”	\$77,000 (direct costs only)
Co-investigator (P.I. Carley, D.)	
National Institutes of Health	04-01-01 to 03-31-06
R01 CA73638	\$1,250,000 (direct) \$1,816,340 (total)
“Biotransformation of estrogens to carcinogenic quinoids”	
Co-investigator (P.I. Bolton, J.L.)	
National Institutes of Health	08-01-01 to 07-31-04
5R01 CA096517	\$965,806 (direct) \$1,320,666 (total)
“Mechanism(s) of antitumor action of tamoxifen and soy”	
Co-Investigator (P.I. Constantinou, A.)	
National Cancer Institute (Workstatement 80)	09-30-01 to 03-29-04
N01-CN-15017-44	\$205,250 (direct) \$319,923 (total)
“Screening various chemopreventive agents in MNU-induced rat mammary tissues”	
Co-Investigator (P.I. Pezzuto, J.M.)	
National Institutes of Health/NCI	09-01-02 to 08-31-08
7 R01CA90759	\$292,224
“The effects of lycopene on high-risk prostatic tissue”	
Co-investigator (P.I. Gann, P)	
National Institutes of Health	09-01-02 to 12-31-09
R01 CA79870	\$1,050,000 (direct) \$1,583,734 (total)
“Carcinogenic metabolites formed from antiestrogens”	
Co-investigator (P.I. Bolton, J.L.)	
National Institutes of Health	09-30-02 to 08-31-04
1 R21 AI052847	\$300,000 (direct) \$467,610 (total)
“The metabolome of non-replicating <i>M. tuberculosis</i> ”	
Co-Investigator (P.I. Pauli, G.F.)	
National Institutes of Health	12-1-02 to 11-30-07
2 R25 CA057699	\$2,474,005 (direct) \$2,662,490 (total)

“Cancer education and career development program”

Co-investigator (P.I. Warnecke, R.B.)

UIC/NIH Botanical Center Pilot Project Program 04-01-03 to 3-31-04
 “Oral lycopene in cervical dysplasia” \$46,001 (direct) \$77,650 (total)
 Principal Investigator

National Institutes of Health 05-01-03 to 04-30-10
 1 R01 CA101052 \$1,250,000 (direct) \$1,676,472 (total)
 “Mechanisms of prostate cancer prevention by lycopene”
 Principal Investigator

National Institutes of Health 07-01-03 to 06-30-05
 1 R03 CA103310 \$100,000 (direct) \$148,930 (total)
 “The bioavailability of folate in humans”
 Principal Investigator

National Institutes of Health 07-01-04 to 04-30-05
 P01 CA48112 supplement \$29,524 (direct RvB) \$51,569 (total RvB)
 “Natural inhibitors of carcinogenesis”
 Core Leader (P.I. Pezzuto, J.M.)
 Supplement to program project grant as bridge funding between 5 year funding cycles

National Institutes of Health 09-01-04 to 03-31-05
 P50 AT000155-06 \$1,013,660 (total)
 “Botanical dietary supplements for women’s health”
 Co-Director, Project Leader, Core Leader

National Institutes of Health/NCCAM 09-30-05 to 08-31-11
 5 P01 AT002605-05 \$34,861 (direct UIC)
 “Arthritis and Traditional Chinese Medicine”
 Co-investigator (P.I. Berman, B.; University of Maryland)

National Institutes of Health 01-15-05 to 12-31-09
 1 R01 CA102590 \$158,000 (annual direct costs)
 “Biointeractions of antiestrogens with NO”
 Co-investigator (P.I. Thatcher, G.R.)

National Institutes of Health 04-01-05 to 03-31-07
 1 S10 RR019370-01A1 \$383,000 (annual direct costs)
 “2D-HPLC-tandem mass spectrometer for proteomics”
 Principal Investigator

National Institutes of Health 04-01-05 to 6-30-10
 P50 AT000155-07 to -11 \$3,415,860 (direct) \$5,333,333 (total)
 “Botanical dietary supplements for women’s health”
 Co-director, Project Leader, Core Leader (P.I. Farnsworth, N.R.)

National Institutes of Health 4-01-05 to 3-31-10

2R01HL063774	\$250,000 (annual direct costs)
“Dynamic interactions of cardiac troponin and tropomyosin”	
Co-Investigator (P.I. Tobacman, L.)	
National Institutes of Health	04-01-05 to 05-31-10
2 P01 HL62426-06	\$241,802 (RvB)
“Integrated mechanisms of cardiac maladaptation”	
Co-investigator Core C (P.I. Solaro/Tomoyoshi)	
National Institutes of Health	07-01-05 to 06-30-10
1 T32 GM070388-01 to -05	\$795,120
“Multi-disciplinary pharmacological sciences training program”	
Co-investigator/mentor (P.I. Malik, A.)	
National Institutes of Health	09-01-06 to 8-32-07
5P01 AT002605	\$57,660 (total)
“Arthritis and traditional Chinese medicine”	
Co-investigator (P.I. Berman, B., University of Maryland)	
National Institutes of Health/NIAID	09-20-06 to 08-31-08
1 R21 AI067652	\$232,500
“Lead identification of 1, 4-benzoxazines as anti-tuberculosis agents”	
Co-investigator (P.I. Franzblau, S)	
Shimadzu Scientific Instruments	04-01-07 to 06-30-09
“High performance LC-MS-MS for natural products analysis” \$128,500	
Principal Investigator	
National Institutes of Health	04-01-07 to 03-31-09
1 S10 RR023785	\$289,904 (direct costs only)
“HPLC time-of-flight mass spectrometer for accurate mass measurements”	
Principal Investigator	
Thermo Fisher Scientific	06-01-07 to 5-31-08
“Ion trap LC-MS ⁿ for ultrafiltration mass spectrometry” \$300,000	
Principal Investigator	
National Institutes of Health /NCRR	05-07-09 to 05-06-10
1S10RR024669	\$127,751
“A shared FTMS instrument upgrade to further biomolecular research”	
Co-investigator (P.I. Schilling, A.)	
National Institutes of Health/NCRR	03-21-11 to 03-20-12
1 S10 RR025653	\$600,000 (direct)
“Orbitrap mass spectrometer for biomedical research”	
Principal Investigator	
National Institutes of Health/NCI	04-01-06 to 03-31-12
P01 CA48112	\$119,000 (annual direct costs; RvB)

“Natural Inhibitors of Carcinogenesis”

Project Leader (P.I. Pezzuto, JM)

National Institutes of Health/NCI

08-01-09 to 07-31-11

P01 CA048112-17S1

\$196,554 (total costs; RvB)

“Natural Inhibitors of Carcinogenesis”

American Recovery and Reinvestment Act of 2009 Administrative Supplement

Project Leader (P.I. Pezzuto, JM)

National Institutes of Health/NCI

04-09-09 to 03-08-12

1R21CA131787

\$438,118 (direct) \$687,845 (total)

“Retinoid and carotenoid depletion in patients at high-risk for liver cancer”

Co-investigator (P.I. Gann, P.)

California Table Grape Commission

06-01-03 to 5-31-12

Principal Investigator

\$34,700 (direct)

“Analysis of chemoprevention agents in grape powder”

Society of Interventional Radiology

07-01-11 to 06-30-12

Co-investigator (P.I. Ron Gaba)

\$37,650 (direct)

“Development, characterization, and validation of radiopaque chemotherapeutic agent for non-invasive verification and monitoring of drug delivery after chemoembolization”

National Institutes of Health/NCI

08-31-07 to 5-31-12

5R01 CA130037

\$291,366 (annual) \$1,445,830 (total)

“Role of electrophilic/redox active quinoids in estrogen carcinogenesis”

Co-investigator (P.I. Bolton, JL)

National Institutes of Health/NCE

07-01-08 to 06-30-12

1R01 CA131970

\$830,000 (direct) \$1,271,200 (total)

“Photoaffinity labeling probes for development of novel isoform selective HDAC inhibitors for cancer”

Co-investigator (P.I. Petukhov, P)

Society of Interventional Radiology

07-01-10 to 07-01-12

2010-06074

\$100,000 (\$24,605 RvB)

“Confirmation of drug delivery after chemembolization: Direct doxorubicin measurement and correlation with CT calculated ethiodol concentration”

Co-investigator (P.I. Gaba, R.)

National Institutes of Health/NCI

09-04-09 to 08-31-12

1R21 CA131787-02, ARRA

\$139,528

“Retinoid and carotenoid depletion in patients at high-risk for liver cancer”

Co-investigator (P.I. Gann, P.)

National Institutes of Health

09-01-11 to 08-31-12

P50 AT000155-11S1

\$94,328 (direct) \$141,208 (total)

“Single Laboratory Validation of Analytical Methods for Estrogenic Botanical Constituents”

Principal Investigator

National Institutes of Health	09-01-11 to 08-31-12
P50 AT000155-12S1	\$45,424 (direct) \$74,780 (total)
“Administrative Supplement for Minority Postdoctoral Trainee”	
Principal Investigator	
 National Institutes of Health	 09-01-11 to 08-31-12
P50 AT000155-12S2	\$2,874 (direct) \$4,584 (total)
“Administrative Supplement for International Conference on Natural Product Research”	
Principal Investigator	
 PepsiCo	 09-29-10 to 09-28-12
2010-2012	\$457,662 (total)
“Blue pigments from thermophiles”	
Principal Investigator	
 3 P50 AT000155-13S1	 09/01/12 to 8/31/13
NIH/NCCAM/ODS	\$60,676
“Predoctoral Fellowship Supplement to Botanical Dietary Supplements for Women’s Health”	
Principal Investigator	
 Hershey Foundation	 05-31-06 to 12-31-13
Principal Investigator	\$468,475 (direct) \$650,555 (total)
“Analysis of cacao, cocoa powder and chocolate for bioactive compounds.”	
 1R01CA129140	 12-01-08 to 11-30-13
National Institutes of Health/NCI	\$2,248,733 (direct) \$3,073,209 (total)
“Adiposity of outcomes of clinically localized prostate cancer”	
Co-investigator (P.I. Freeman, V.)	
 2R01 CA79870	 10-01-09 to 05-30-14
National Institutes of Health/NCI	\$1,149,545
“Carcinogenic metabolites formed from antiestrogens”	
Co-investigator (P.I. Bolton, J.L.)	
 P50 AT000155-12 to -16	 09-01-10 to 08-31-15
National Institutes of Health/ODS/NCCAM	\$4,787,594 (direct) \$7,420,771 (total)
“Botanical Dietary Supplements for Women’s Health”	
Principal Investigator	
 R21 AI099636	 09-09-13 to 08-31-15
National Institutes of Health/NIAID	\$266,000 (direct) 419,721 (total)
“Discovery of novel anti-HBV compounds targeting host factors.”	
Co-investigator (P.I. Petukhov, P)	
 T32 AT007533	 01-01-13 to 12-31-17
National Institutes of Health/NCCIH	\$2,068,291 (direct) \$2,170,714 (total)
“Research Training in Natural Product Complementary and Alternative Medicine”	
Principal Investigator	

R01 AT007659 08-01-13 to 07-31-18
 National Institutes of Health/NCCAM \$866,250 (direct) \$1,352,424 (total)
 “Rapid identification of active agents and metabolomics of botanical supplements”
 Principal Investigator

1 U01NS083457 09-01-13 to 08-31-18
 National Institutes of Health/NINDS (FY 1-3) \$1,420,247 (direct) \$2,145,321 (total)
 “Intralipid: A novel frontline countermeasure for brodifacoum poisoning”
 Co-investigator (P.I. Feinstein, DL)

U41 AT007659 08-01-13 to 07-31-18
 National Institutes of Health/NCCIH \$818,4454 (direct) \$1,299,655 (total)
 “Center for natural product technologies at UIC”
 Co-investigator (P.I. Pauli, GF)

P50 AT000155-19S1 07-31-18 to 06-30-19
 National Institutes of Health/NCCIH \$100,000 (direct) \$146,903 (total)
 “Single laboratory validation of UHPLC-MS/MS assays of red clover and milk thistle”
 Analytical Core Leader

2. Current Research Support

P50 AT000155-16 to -20 09-01-15 to 12-31-20
 National Institutes of Health/ODS/NCCIH \$5,730,434 (direct) \$8,996,648 (total)
 “Botanical Dietary Supplements for Women’s Health”
 Principal Investigator and Director (2011-2017), Co-Director (1999-2011), Project Leader, Core Leader
 This is the third competitive renewal of this NIH Center grant for Dietary Supplements Research which is focused on the safety, efficacy and mechanisms of action of botanicals used to manage menopausal symptoms.

R01 HL129153 05-01-17 – 04-30-21
 National Institutes of Health/NHLBI \$492,224 (direct) \$805,969 (total)
 “Mediterranean diet, weight loss and cognition in obese older adults”
 Co-investigator (P.I. Fitzgibbon, M)
 The goal of this project is to study the benefits of a Mediterranean diet, with or without caloric restriction, in promoting weight loss and cognitive function in obese older adults. Dr. van Breemen’s role is to provide analytical measurements of biomarkers of oxidative stress.

T32 AT010131 12-01-19 to 11-30-24
 National Institutes of Health/NCCIH \$238,306 (per year) \$1,191,530 (total)
 “Research training in natural product complementary and integrative health.”
 Principal Investigators van Breemen, R (contact), and Mahmud, T.
 The focus of this grant is to train predoctoral students for careers in natural products and dietary supplements research. This is a collaboration between the College of Pharmacy and the Linus Pauling Institute at Oregon State University.

EMERGENCY D-Virus**Plan of Care****CELLULAR THERAPY****DIETARY SUPPLEMENT PRODUCTS**

AnterFerron-1, AnterFerron-2, ImunStem, and Aktiffvate

COMPANY

Golden Sunrise Nutraceutical, Inc.

219 North E Street

PORTERVILLE, CA 93257 * U.S.A.

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PLEASE DOWNLOAD AT

www.goldensunrisenutraceutical.com

“TREATMENT”

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1.0 INTRODUCTION

Stephen R. MEIS, M.D., Board Certified, I strongly recommend Golden Sunrise Nutraceutical Incorporation herbal products *ImunStem* and *Aktiffvate*, along with their *AnterFeerons* product, as uniquely qualified to treat and modify the course of the Coronavirus epidemic in CHINA and other countries. Patients with late stages of *COVID-19*, *Hepatitis C*, and *AIDS / HIV* have responded with greatly improved quality-of-life and extending their lives when treated with *ImunStem* and *Aktiffvate*. For viral colds, *Aktiffvate*, when given in frequent dosing, as frequent as every one half (½) hour to one (1) hour, will not only alleviate the symptoms quickly, but stop the cold virus itself, usually in less than 2 – 3 days. Now *AnterFeerons* has been added to the *ImunStem* and *Aktiffvate* and shown added improvement for a variety of infections associated with cancer patients and the chronically ill, whether it be viral or bacterial.

ImunStem and *Aktiffvate* herbs are the basis of the whole cellular therapy developed by Golden Sunrise Nutraceutical. They have proven themselves to the United States Food & Drug Administration (FDA). *ImunStem*, an herbal product, was the first dietary supplement in the United States to be approved as a prescription medicine and also for the indication to treat *Serious or Life-threatening* conditions. It qualified for both of these under the Regenerative Medicine Advance Therapy (RMAT) designation in the 2016 Cures Act, enacted by the 114th United States Congress. This designation acknowledges not only the effectiveness of these herbs, usually only associated with pharmaceutical drugs, but also causing no side effects, a quality of dietary supplements.

Golden Sunrise Nutraceutical metabolic therapies will treat *Serious or Life-threatening* conditions. These conditions result from an accumulation of toxins in the body from food additives, preservatives, pesticides, prescription drugs, and industrial pollution that disrupt the immune system and cell metabolism. Regenerating the cellular metabolic abnormalities with plant based botanicals found in the *EMERGENCY D-Virus Plan of Care* is the basis for the remarkable improvement for human health.

The technology developed by Golden Sunrise Nutraceutical is the key for the effectiveness of the herbs on the immune system and cellular metabolism. They have immune stimulating properties. In-vivo studies on treated patients demonstrate increasing phagocytic activity and synthesis of helper cell function. The cells possess a bipolarity and lipophilicity that facilitates molecular diffusion through permeable and selective membranes, including crossing the blood / brain barrier. Golden Sunrise Nutraceutical herbal supplements are able to penetrate the cells at the cellular level without any disruption or damage to the cells because they are recognized as food. This food provides the cells with the necessary building blocks for the cells to repair and rejuvenate themselves and flush out the accumulated toxins in the cells.

Golden Sunrise Nutraceutical products and treatments improve genetic *Telomeres* for cellular regeneration which increases the overall-health of the body and can increase human longevity.

2.0 INSTRUCTIONS FOR THE TREATMENT

General dosing recommendations: *ImunStem* and *Aktiffvate* should be taken throughout the course of the illness. Recommended starting dose for those without any viral symptoms would be twice a day administration, but for someone with chronic health issues three (3) or four (4) times a day is advised. For someone who is exhibiting symptoms, after three (3) days of the *ImunStem* and *Aktiffvate*, the

Aktiffvate alone should be increased to a quarter dropperful for about eight (8) or nine (9) times a day in addition to be *ImunStem* / *Aktiffvate* combination already being taken by the patient. With this increased dosing of *Aktiffvate*, disappearance of viral symptoms is expected within two (2) to four (4) days. If symptoms however do not resolve with this regimen or the person is steadily worsening, the *AnterFeerons* should be used as directed. For the infirmed or elderly, the *AnterFeerons* must be administered under direct observation of health professionals, because it will bring on nausea and or vomiting as part of utilizing the body's natural shedding mechanism of the illness / virus. It will cause some dehydration which must be compensated either by an electrolyte solution (*Pedialyte*, *Gatorade*, etc.) or IV fluids.

2.1 Administration and Dosage of *IMUNSTEM* and *AKTIFVATE*

Upon the first visit it is suggested that once the medical evaluation of the patient is completed and the medical staff deems it appropriate, then patients will receive $\frac{1}{2}$ – $\frac{3}{4}$ of a dropperful of *ImunStem* and *Aktiffvate* 1–4 times a day. The medical staff should monitor the patient for at least ten (10) minutes to help with any effects that might need other medical attention. For example, *ImunStem* can open and improve blood flow throughout the body and the patient might experience a feeling of warmth and begin having nasal mucus discharge. After ten (10) minutes if the patient is stable, the $\frac{1}{2}$ – $\frac{3}{4}$ dropperful of *Aktiffvate* should be administered with similar monitoring.

ImunStem and *Aktiffvate* are liquid form:

Product	Dose	Dose Size of a Dropper	Dose Per day
<i>ImunStem</i>	1 ml	$\frac{1}{2}$ - $\frac{3}{4}$	1–4
<i>Aktiffvate</i>	1 ml	$\frac{1}{2}$ - $\frac{3}{4}$	1–4

2.2 Administration and Dosage of *ANTERFEERONS*

Take one fluid ounce (1 fl.oz.) of *AnterFeeron-1*. Then in forty-five (45) minutes to one (1) hour following ingestion of *AnterFeeron-1*, take one fluid ounce (1 fl.oz.) of *AnterFeeron-2*, administered in the same dose. Each bottle must be emptied into a small glass and swallowed quickly all at once (not sipped or sniffed), followed by water to wash it down.

AnterFeeron-1 and *AnterFeeron-2* are liquid form:

Product	Dose
<i>AnterFeeron-1</i>	1 fl.oz.
<i>AnterFeeron-2</i>	1 fl.oz.

2.3 Ongoing Treatment

The patient should receive $\frac{1}{2}$ – $\frac{3}{4}$ of a dropperful of *ImunStem* and *Aktiffvate* between 1–4 times daily for the first two (2) weeks. Then another medical evaluation should be performed to evaluate their effectiveness and to determine if modification in dose to 2–3 times daily is appropriate. Blood test before treatment, and at 2–4 weeks can be helpful to evaluate effectiveness. If the patient appears to be stable, then other Golden Sunrise Nutraceutical product supplementation should be added to specific conditions or diseases of the patient. All future treatments should take into account any physicians evaluations, blood reports or other information pertinent to the treatment of the patient.

ImunStem, *Aktiffvate*, and *AnterFeerons* are available now and once they are started, they will help alleviate the people immediately with the acute illness of the Coronavirus. But this treatment, which is tailored for this acute emergency, is the beginning of Golden Sunrise Nutraceutical's **METABOLIC Plan of Care**. The **METABOLIC Plan of Care** is a carefully planned course of therapy with herbal treatments to treat at a cellular level chronic illnesses such as hypertension, diabetes, peripheral neuropathies, parkinsonism, multiple sclerosis, gastrointestinal conditions, schizophrenia, Lyme's disease, to name a few. It is a preventative for cancer, which primarily is a metabolic problem like our other diseases. For those who start with the **EMERGENCY D-Virus Plan of Care**, it would be ideal to continue with Golden Sunrise's **METABOLIC Plan of Care**.

3.0 WARNING AND PRECAUTIONS

ADMINISTRATION OF *IMUNSTEM*, *AKTIFFVATE*, *ANTERFEERON-1*, and *ANTERFEERON-2*, SHOULD ALWAYS BE UNDER THE SUPERVISION OF A PHYSICIAN.

RECOMMENDATION FOR GOLDEN SUNRISE NUTRACEUTICAL **EMERGENCY D-VIRUS PLAN OF CARE** IS BASED ON MEDICAL EVALUATION OF THE PATIENT. THESE PRODUCTS CAN LOWER BLOOD SUGAR IN DIABETICS AND LOWER BLOOD PRESSURE IN HYPER-TENSIVE PATIENTS. BLOOD SUGAR AND BLOOD PRESSURE SHOULD BE MONITORED FOR THOSE WITH A HISTORY OF HIGH SENSIVITY TO MEDICATIONS. A LOWER STARTING DOSE MIGHT BE APPROPRIATE.

4.0 DRUG INTERACTIONS

ImunStem, *Aktiffvate*, and *AnterFeerons* has been reported, so far, to have had many interactions with single or multiple combination of prescription drugs. You should always read product labels. If you have a medical condition, or are taking other prescription drugs, herbs, or dietary supplements, you should speak with a qualified healthcare provider before starting a new therapy.

5.0 THERAPEUTIC RESPONSE

5.1 Adverse Sensitivity Response of *ImunStem* and *Aktiffvate*

- *ImunStem* and *Aktiffvate* can cause severe allergic skin rashes.
- Vomiting.
- In rare circumstances an adverse sensitivity response in the mouth, such as mild blisters, have occurred.
- A burning sensation in the throat in the beginning of oral treatment may occur, but it subsides. If the burning sensation persists, gelatin capsules used for administration, may be substituted as an alternative.

6.0 RESULTS OF PATIENTS AFTER TREATMENT

The group of patients **COVID-19** virus found that **EMERGENCY D-Virus Plan of Care** improved the immune system and alertness immediately. Physicians have observed that using **EMERGENCY D-Virus Plan of Care** provokes a significant response, i.e., a reduction in symptoms in patients with the **COVID-19** virus.

On April 2020, five (5) patients administered **EMERGENCY D-Virus Plan of Care** over the course of time from 1 – 2 weeks, controlled under supervision of a physician “**Clinical Assessment and Progress Note**” included observations by Golden Sunrise Nutraceutical medical staff.

Safety was monitored and throughout these five (5) patients no adverse side-effects were noticed. A total of five (5) patients were diagnosed with **COVID-19** virus that required close monitoring by both the attending physician, specialist of that field and by Golden Sunrise Nutraceutical medical staff.

Five (5) PATIENTS’ Histories and EMERGENCY D-Virus Plan of Care Treatment of COVID-19.

Four (4) patients who were confirmed with **COVID-19** illness, were treated with the **EMERGENCY D-VIRUS Plan of Care**. They were all treated in their homes. They showed improvement by day number day two (#2) or number day three (#3) of the treatment. All were asymptomatic by day number seven (#7) to day number nine (#9) of treatment.

- a) M.T. is a 49-year-old, Caucasian nurse with heart arrhythmia, female. Her symptoms first began on Thursday, 04/02/2020 with ninety-nine point six (99.6°F) degrees Fahrenheit fever, some body aches and bad headaches. She quickly progressed to fevers, tightness in her chest, shortness of breath, severe fatigue, generalized muscle aches and pains, no appetite, headaches, sore throat, and severe dry cough.

She started **EMERGENCY D-Virus Plan of Care** treatment on Saturday, 04/04/2020 (her **COVID-19** test resulted positive on Sunday, 04/05/2020). The next day she ‘sensed’ improvement, but uncertain of any improvement. By day number five (#5), on Wednesday, 04/08/2020, she exclaimed “I can take a deep breath” and she “slept like a baby”. By Sunday, 04/12/2020, day number nine (#9), she was completely asymptomatic of all of her symptoms, and **repeat COVID-19** test was done on **Friday, 04/17/2020. It was positive.** The next day, day number fifteen (#15) on Saturday, 04/18/2020, she had a fever of ninety-nine point nine (99.9°F) degrees Fahrenheit and increasing cough, no other symptoms, energy level was still good. She proceeded to the **METABOLIC Plan of Care** that evening. On day number sixteen (#16) and day number seventeen (#17), on Sunday, 04/19/2020 and Monday, 04/20/2020, no fevers and the cough continues improvement on the **METABOLIC Plan of Care.**

- b) R.H. is a 50-year-old, Hispanic insulin-using diabetic and asthmatic, male. He was confirmed **COVID-19** positive on Thursday, 04/02/2020. He **failed** a five (5) days course of **Hydroxychloroquine** and **Azithromycin**. He was still experiencing fevers up to one hundred and three point five (103.5°F) degrees Fahrenheit, severe headaches, chills, loss of appetite with loss of about five (5 lbs) pounds, shortness of breath, bad dry cough, chest tightness, severe generalized muscle pains, extreme fatigue, and insomnia, and some diarrhea (from the **Hydroxychloroquine** most likely per patient).

He started the **EMERGENCY D-Virus Plan of Care** on the evening of Wednesday, 04/08/2020. Successively, starting with the next day of treatment, on Thursday, 04/09/2020, his fevers started to improve as well as his other symptoms. Since day number six (#6) on Monday, 04/13/2020, he remained afebrile. He was completely asymptomatic (no cough / chest tightness, etc.) by day

number nine (#9) on Thursday, 04/16/2020. **COVID-19** retest was **positive** on **Friday, 04/17/2020**, day number ten (#10) of follow up even though he had been afebrile since Monday, 04/13/2020. The next day number eleven (#11), **Saturday, 04/18/2020**, the patient had a **temperature of ninety-eight point nine (98.9°F)** degrees Fahrenheit and question of chest tightness, but he felt great energy and he **ran two (2) miles** that day. He was started on the **METABOLIC Plan of Care** that day, on Saturday, 04/18/2020, and has remained asymptomatic on this.

- c) D.M. is a 64-year-old, healthy Caucasian who had persisting symptoms for three (3) weeks, male. He returned with his wife, from NETHERLANDS Holland on Tuesday, 03/17/2020. He was in bed for two (2) days with fever, chills, a cough – dry and also productive at times, chest tightness, loss of his sense of taste and smell, no appetite, slight headaches, burning in his nasal / sinus areas, and mild muscle aches. He was not able to completely recover. He continued to suffer from low energy, poor sense of taste and smell, mild dry cough, some tightness in his chest and inability to take a deep breath, and recurrent mild headaches. He could become winded and light-headed doing outdoor chores. He was **COVID-19** confirmed on Thursday, 04/09/2020.

On Thursday, 04/09/2020 he started the **EMERGENCY D-Virus Plan of Care**. Steadily his symptoms improved until he was asymptomatic by day number seven (#7) of treatment, on Wednesday, 04/15/2020.

- d) N.M. is a 62-year-old, healthy Caucasian who returned from her trip with her husband from NETHERLANDS Holland on Tuesday, 03/17/2020, female. She similarly like her husband battled with persisting symptoms for about three (3) weeks. About on Thursday, 03/19/2020 she was in bed for two (2) days. She had a low-grade fever, mild headaches, generalized muscle achiness, bad dry cough, tightness in the chest, shortness of breath, fatigue, poor appetite, and poor sense of taste and smell. She slowly improved, but she had persisting mild / moderate dry and productive cough, chest tightness, fatigue, and some improved appetite. She was having periodic fever as well, none of them ever higher than one hundred (100°F) degrees Fahrenheit. She failed a course of **Ciprofloxacin** and then was **COVID-19** positive on Saturday, 04/04/2020. On Wednesday, 04/08/2020, she took only one (1) dose each of **Hydroxychloroquine** and **Azithromycin**, then chose the **EMERGENCY D-Virus Plan of Care**.

On Wednesday, 04/08/2020 she started **EMERGENCY D-Virus Plan of Care** (day number one (#1) of treatment). By the next day, on Thursday, 04/09/2020, day number two (#2) of treatment, she already had improved energy and ability to concentrate. Her symptoms steadily improved until she was symptom-free by Wednesday, 04/15/2020, day number eight (#8) of treatment.

- e) A **fifth COVID-19** positive patient on Saturday, 04/11/2020, started receiving the **EMERGENCY D-Virus Plan of Care** on Wednesday, 04/15/2020.

N.R. is a 28-year-old, healthy Hispanic male, who started symptoms on Friday, 04/10/2020 with fevers up to one hundred and two (102°F) degrees Fahrenheit, shortness of breath, sinus / nasal congestion and pressure, “non-stop” phlegm production, no appetite, extreme fatigue, generalized muscle pain, insomnia, and poor taste and smell.

On Wednesday, 04/15/2020 he started **EMERGENCY D-Virus Plan of Care**. By the next day, day number two (#2) of treatment, on Thursday, 04/16/2020, the patient was already noticing improvement in his taste and smell, and most of his other symptoms, i.e. muscle pain etc. He has been afebrile since day number four (#4), on Saturday, 04/18/2020. Follow up in coming.

Summary:

All patients have become completely asymptomatic by day number seven (#7) to day number nine (#9) of treatment with the **EMERGENCY D-Virus Plan of Care**. Once people are afebrile for three (3) days and with improved cough, current policy allows discontinuation of self-quarantine measures. Up until now, because there has been no effective treatment, the effort of controlling the **COVID-19** virus pandemic has necessitated a preventative approach, utilizing social isolation measures and testing. Success with these measures come at great cost both socially and economically. Now with the **EMERGENCY D-Virus Plan of Care** showing effective treatment for the **COVID-19** virus, the focus can change, at it should, from prevention to treatment. Social isolation and **COVID-19** testing can be significantly adjusted with treatment taking the primary approach of controlling the **COVID-19** virus. Prompt administration of this treatment will significantly diminish the occurrence of serious cases and need for hospitalization. Confidence can be restored and people can return much more quickly, more likely in a matter of seven (7) to nine (9) days instead of weeks, to a more normal life style.

7.0 STORAGE, HANDLING, AND PRODUCTS**7.1 Storage and Stability**

STORAGE: Store materials at controlled room temperature 20°C (68°F).

STABILITY: **EMERGENCY D-Virus Plan of Care** is chemically stable for two (2) years at room temperature. Do not freeze.

7.2 Product Classification

Dietary Supplement.

8.0 ATTACHMENT LABELS

ImunStem, Aktiffvate, AnterFerron-1, and AnterFerron-2

9.0 HOW SUPPLIED**9.1 Packaging**

PRODUCT	CONTAINER CONTENT	NET CONTENT
<i>AnterFerron-1</i>	1 bottle	1 fl.oz. Liquid
<i>AnterFerron-2</i>	1 bottle	1 fl.oz. Liquid
<i>ImunStem</i>	2 bottle	1 fl.oz. Liquid
<i>Aktiffvate</i>	2 bottle	1 fl.oz. Liquid

AnterFeeron-1

Dietary Supplement

WARNING

Keep out of reach of children
do not use if safety seal is damaged or missing

SUPPLEMENT FACTS

Serving Size: (1 fl.oz.) (491.50mg)

Serving Per Container: One (1) serving

Amount Per Serving		%DV
Bilberry leaf	40mg	**
Graviola	120mg	**
Goldenseal	80mg	**
** Daily Value (DV) not established.		

Other Ingredients: solvents, organic compounds, Chuchuhuasi, Cayenne, Maca, and Turmeric.

STRUCTURE FUNCTION

“Support Immunity” and “Boost Stamina”

“Helps Maintain Joint Health and Flexibility”

“Helps Maintain Cardiovascular Function and a Healthy Circulatory System”

The *AnterFeeron-1* has no side-effects. It will promote the body's natural cleansing process which may include purging responses such as nausea, diarrhea, vomiting and mucus discharges. Other possible symptoms a person can experience may depend on the person's previous health issues, which may include headaches, migraines, weakness, muscle aches, joint pain, heart palpitations, inflammation of the throat, excessive bloating, gas, and shortness of breath. These symptoms are only temporary at the time that the patient is being treated with *AnterFeeron*. ONLY USE UNDER THE SUPERVISION OF A PHYSICIAN'S CARE.

Administration: Empty entire contents of *AnterFeeron-1* into a glass cup and swallow entire contents.

Dosage: Take one fluid ounce (1 fl.oz.)

AnterFeeron-1 dietary supplement may support immunity, improve overall health for the human body and maintain good well-being.

WARNING: Not recommended for use by pregnant or nursing women. Should you have any questions regarding the use of *AnterFeeron-1*, please consult your doctor or call the product hot line in U.S.A. at 1.559.781.0658 or 1.559.361.0097. Keep out of reach of children. To be kept in a dry and cool place.

* These statements have not been evaluated by the Food and Drug Administration (FDA). This product is not intended to diagnose, treat, cure or prevent any disease.

AnterFeeron-2

Dietary Supplement

WARNING

Keep out of reach of children
do not use if safety seal is damaged or missing

SUPPLEMENT FACTS

Serving Size: (1 fl.oz.) (491.50mg)

Serving Per Container: One (1) serving

Amount Per Serving		%DV
Astragalus	20mg	**
Reishi	95mg	**
Mistletoe	45mg	**
** Daily Value (DV) not established.		

Other Ingredients: Cat's claw, organic compounds, Echinacea, and Cordyceps.

STRUCTURE FUNCTION

"Promote Bowel Movements"

The *AnterFeeron-2* has no side-effects. It will promote the body's natural cleansing process which may include purging responses such as nausea, diarrhea, vomiting and mucus discharges. Other possible symptoms a person can experience may depend on the person's previous health issues, which may include headaches, migraines, weakness, muscle aches, joint pain, heart palpitations, inflammation of the throat, excessive bloating, gas, and shortness of breath. These symptoms are only temporary at the time that the patient is being treated with *AnterFeeron*. ONLY USE UNDER THE SUPERVISION OF A PHYSICIAN'S CARE.

Administration: Empty entire contents of *AnterFeeron-2* into a glass cup and swallow entire contents.

Dosage: Take one fluid ounce (1 fl.oz.)

AnterFeeron-2 dietary supplement may support immunity, improve overall health for the human body and maintain good well-being.

WARNING: Not recommended for use by pregnant or nursing women. Should you have any questions regarding the use of *AnterFeeron-2*, please consult your doctor or call the product hot line in U.S.A. at 1.559.781.0658 or 1.559.361.0097. Keep out of reach of children. To be kept in a dry and cool place.

* These statements have not been evaluated by the Food and Drug Administration (FDA). This product is not intended to diagnose, treat, cure or prevent any disease.

ImunStem[®]

Dietary Supplement

WARNING

Keep out of reach of children
do not use if safety seal is damaged or missing

SUPPLEMENT FACTS

Serving Size: (0.50ml) (491.50mg)

Serving Per Container: 25 servings

Amount Per Serving		%DV
Olive Leaf extract	260mg	**
Yarrow extract	52mg	**
Rosemary extract	63mg	**
** Daily Value (DV) not established.		

Other Ingredients: Organic compounds and solvents, monoterpene, Cassia oil, and Yucca.

STRUCTURE FUNCTION

“Support Immunity” and “Boost Stamina”

“For the Relief of Occasional Sleeplessness”

“Maintains Healthy Lung Function”

“Helps Restore Mental Alertness or Wakefulness when Experiencing Fatigue or Drowsiness”

“Helps You Relax”

ADVERSE ACTIONS

- * In rare circumstances an adverse reaction in the mouth such as “mild blisters” have occurred.
- * A burning sensation in the throat in the beginning of oral treatment may occur, but subsides. If the burning sensation persists, filling gelatin capsules and swallowing may be substituted as an alternative.
- * Vomiting.
- * Yarrow flowers can cause severe allergic skin rashes.

Shake bottle well before using and use dropper to place $\frac{1}{2}$ – $\frac{3}{4}$ dropperful of *ImunStem* under the tongue. Leave under the tongue for approximately forty (40) seconds and then swallow with a drink of water.

Dosage: Take $\frac{1}{2}$ – $\frac{3}{4}$ dropperful, 1–4 times a day, as frequently as every 1–3 hours.

ImunStem dietary supplement may support immunity, improve overall health for the human body and maintain good well-being.

WARNING: Not recommended for use by pregnant or nursing women. Should you have any questions regarding the use of *ImunStem*, please consult your doctor or call the product hot line in U.S. at 1.559.781.0658 or 1.559.361.0097. Keep out of reach of children. To be kept in a dry and cool place.

* These statements have not been evaluated by the Food and Drug Administration (FDA). This product is not intended to diagnose, treat, cure or prevent any disease.

Aktiffvate®

Dietary Supplement

WARNING

Keep out of reach of children
do not use if safety seal is damaged or missing

SUPPLEMENT FACTS

Serving Size: (0.50ml) (491.50mg)

Serving Per Container: 25 servings

Amount Per Serving		%DV
Turmeric extract	175mg	**
Cayenne extract	40mg	**
Eucalyptus extract	20mg	**
** Daily Value (DV) not established.		

Other Ingredients: Wintergreen, solvents, organic compounds, Yucca, and Olive leaf.

STRUCTURE FUNCTION

“Support Immunity” and “Boost Stamina”

“For the Relief of Occasional Sleeplessness”

“Maintains Healthy Lung Function”

“Helps Restore Mental Alertness or Wakefulness when Experiencing Fatigue or Drowsiness”

“Helps You Relax”

“Helps Maintain Cardiovascular Function and a Healthy Circulatory System”

“Reduces Stress and Frustration”

ADVERSE ACTIONS

* In rare circumstances an adverse reaction in the mouth such as “mild blisters” have occurred.

* A burning sensation in the throat in the beginning of oral treatment may occur, but subsides. If the burning sensation persists, filling gelatin capsules and swallowing may be substituted as an alternative.

* Vomiting.

Shake bottle well before using and use dropper to place ½ – ¾ dropperful of *Aktiffvate* under the tongue. Leave under the tongue for approximately forty (40) seconds and then swallow with a drink of water.

Dosage: Take ½ – ¾ of a dropperful, 1–4 times a day, as frequently as every 1–3 hours.

Aktiffvate dietary supplement may support immunity, improve overall health for the human body and maintain good well-being.

WARNING: Not recommended for use by pregnant or nursing women. Should you have any questions regarding the use of *Aktiffvate*, please consult your doctor or call the product hot line in U.S. at 1.559.781.0658 or 1.559.361.0097. Keep out of reach of children. To be kept in a dry and cool place.

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